



Air-Way UNIT HEATERS

Air-Way AERIETS

EFFECTIVE HEAT DISTRIBUTION
WITH MECHANICAL CONVECTION

Air-Way
HEATING SYSTEM DIVISION

AIR-WAY ELECTRIC APPLIANCE CORPORATION, TOLEDO, OHIO.

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To the Architect, Heating Engineer or Builder:

This file folder and booklet has been designed to become a part of your American Institute of Architects file. It is intended to bring you descriptive material and technical information on the latest developments in heating engineering from the Heating Division of the Air-Way Electric Appliance Corporation, Toledo, Ohio. We believe that you will welcome it as a permanent and valuable addition to your A.I.A. file, and as such will refer to it when any heating problem arises in the course of your work.

This loose-leaf booklet is divided into four sections, each distinguished from the others by being printed on a different color paper stock. The sections planned for inclusion in this booklet are:

General Information.....	Section 10
<i>(White paper)</i>	
Unit Heaters.....	Section 100
<i>(India tint paper)</i>	
The AERIET Built-In Heating Unit for Steam, Hot Water or Vapor.....	Section 200
<i>(Blue tint paper)</i>	
The Electric AERIET, Built-In Heating Unit for Electricity.....	Section 300
<i>(Green tint paper)</i>	

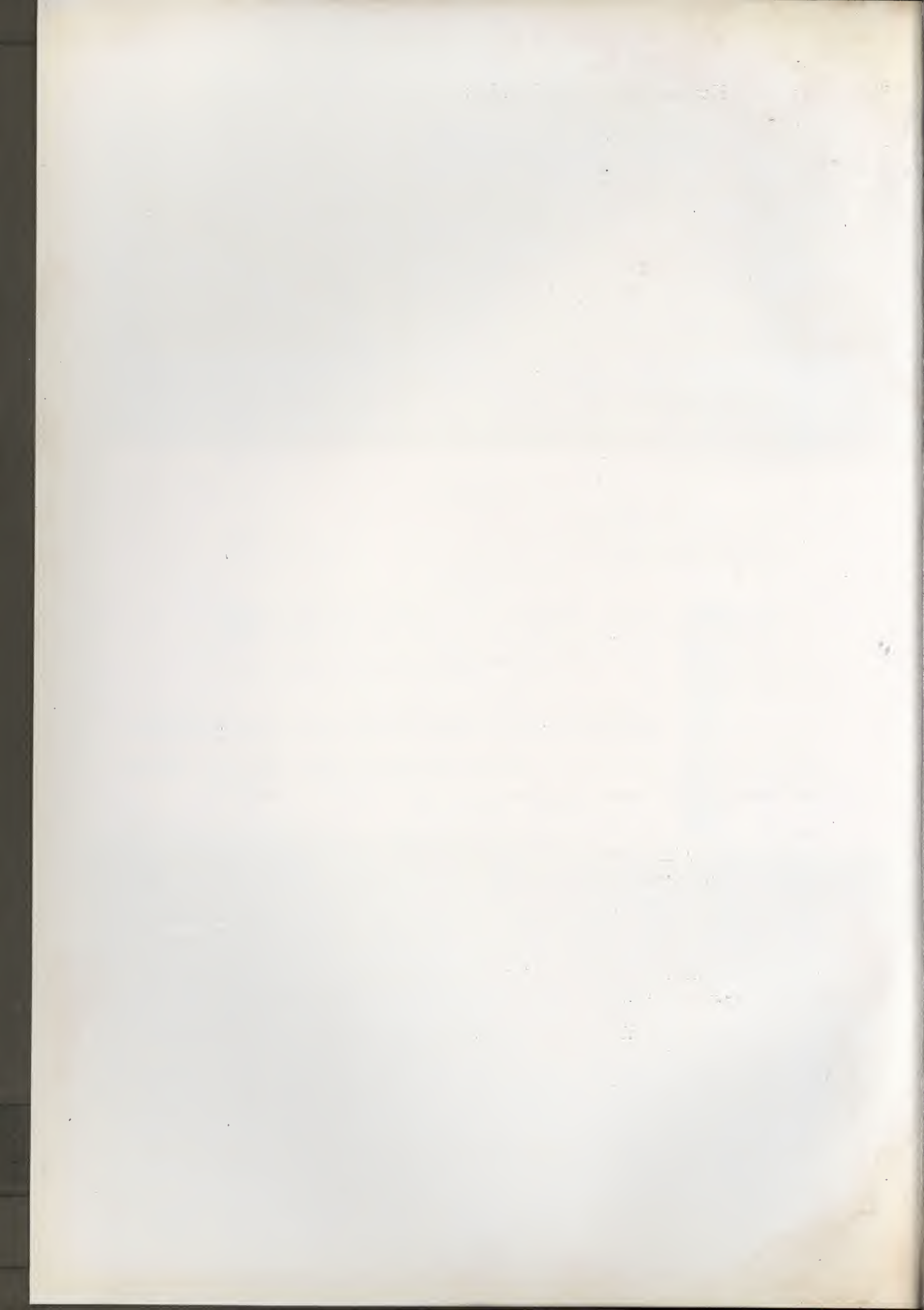
HOW TO USE THIS BOOK

First of all file this book and file folder in the proper section (30-D-11) of your American Institute of Architects file where it will be available for reference.

From time to time you will receive loose-leaf pages to supplement the information given here, and to keep your file up-to-date. Each page sent you will carry a section number, page number and date, and will be printed on the same color paper as the section of which it is a part. The section number, and color will indicate the section in the binder in which the page should be placed. The page number will indicate the order in which it should be filed. When revisions are made in data, substitute pages will be furnished, marked plainly to indicate that they are revisions, and bearing the date of revision so that new matter can be instantly differentiated from old.

We want to make this file your source of most reliable up-to-date information on heating engineering. We believe that you will find it so. Our engineering department will welcome at all times your suggestions and your requests for further information.

AIR-WAY ELECTRIC APPLIANCE CORPORATION
Heating System Division
Toledo, Ohio





The Factory and the Organization Behind the Product

Air-Way Electric Appliance Corporation of Toledo, Ohio, with capital and surplus in excess of \$4,000,000.00, over a period of years has enjoyed a national reputation for reliability and excellence of its products. As manufacturer of the Air-Way Sanitary System it has earned the position of leadership in its field.

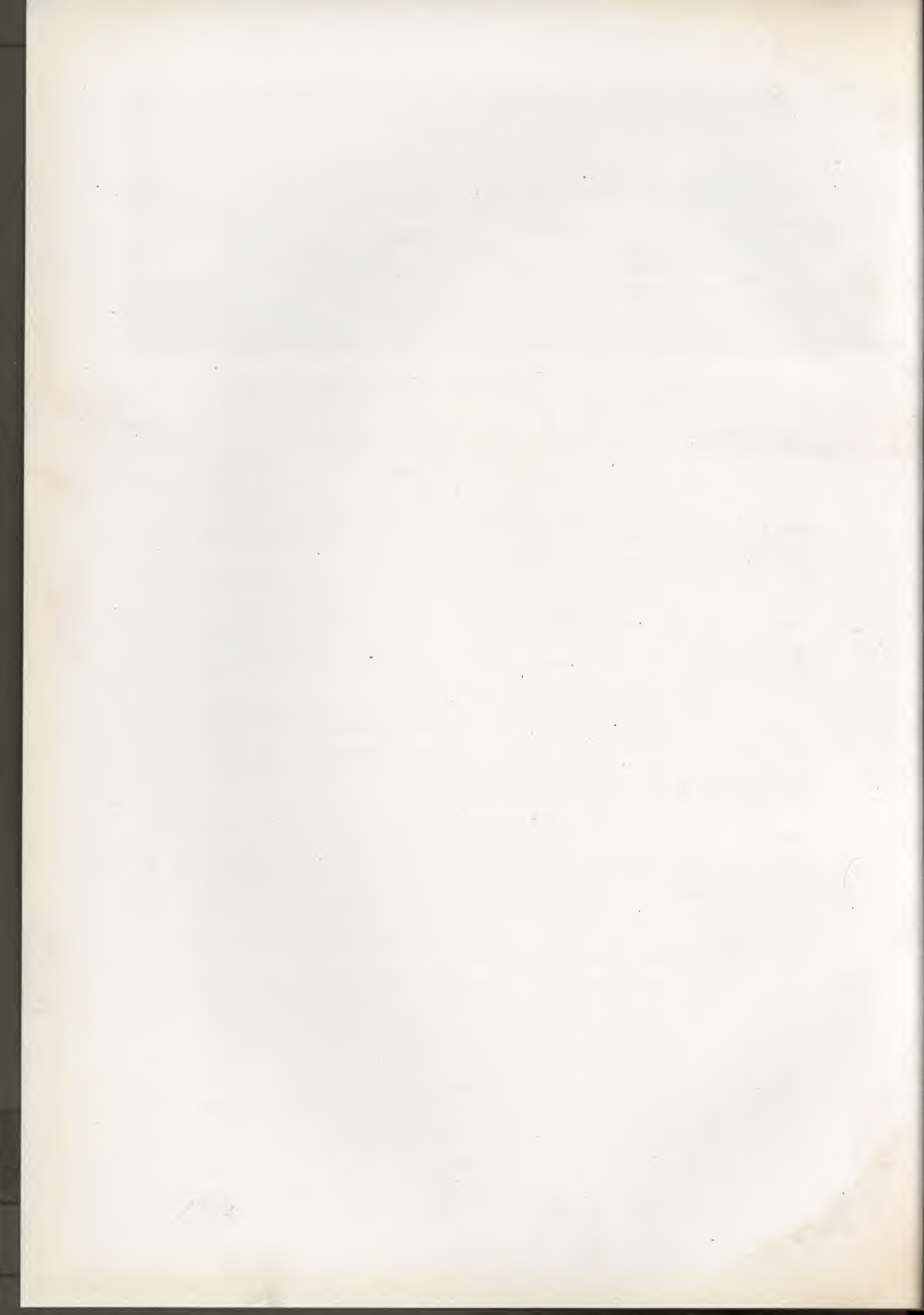
The engineers of the Air-Way laboratories have specialized for years in the study and application of air streams to particular problems concerning the Air-Way products. Backed by tremendous resources, they have not spared expense in research. Application of findings by Air-Way engineers to heating problems has led to many new developments.

Air-Way Electric Appliance Corporation, in 1929, acquired by purchase the entire business of Erie Heating Systems, Inc. of Erie, Pa. The name of the Erie Unit Heater was changed to "Air-Way Unit Heater." All manufacturing operations are now carried on at the great Air-Way plant in Toledo.

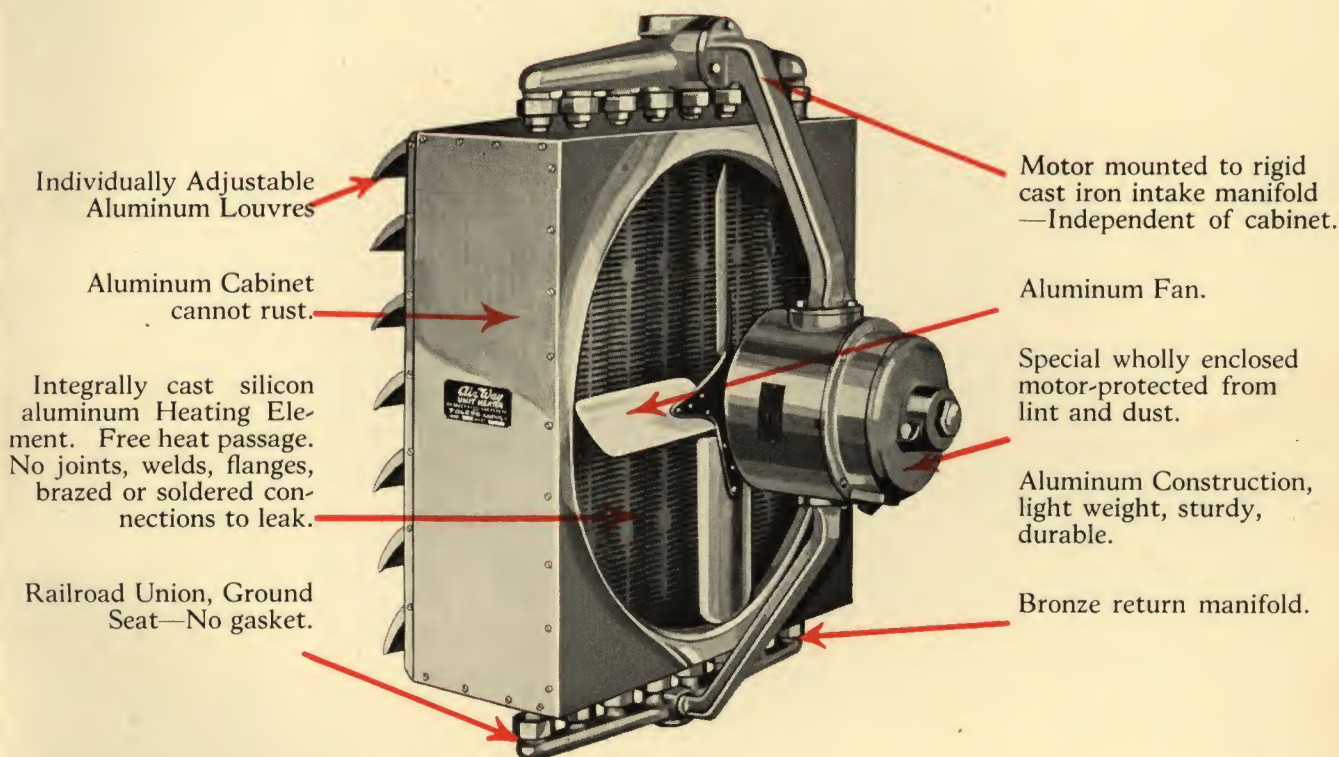
The line now includes the Air-Way Unit Heater in three standard sizes for industrial use; the Air-Way AERIET, a built-in wall type heating unit operating from steam, hot-water, vapor, or electricity, employing the principle of mechanical convection rather than gravity convection or radiation, for use in homes, apartments, hotels, offices, hospitals, etc., and the Portable Electric AERIET, a self-contained electrically operated convection heating unit which can be moved from place to place as desired.

Air-Way provides for its Heating System Division the same high standard of materials, precision workmanship and engineering skill that has always characterized Air-Way products. It makes available for its Heating Division the highly skilled engineers and technicians, the splendidly equipped laboratories, the extensive manufacturing facilities and the tremendous financial resources which assure the purchaser of a perfected product, immediate delivery, and absolute responsibility for his satisfaction in use.

AIR-WAY ELECTRIC APPLIANCE CORPORATION
Heating System Division
Toledo, Ohio



AIRWAY UNIT HEATERS



MODEL 27 UNIT HEATER

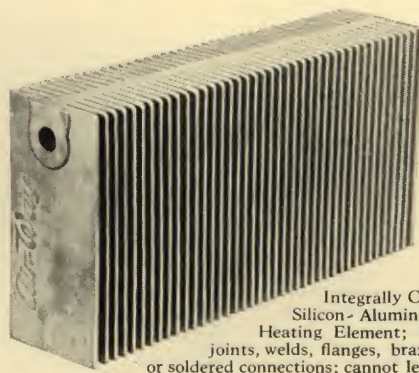
The Air-Way Unit Heater is made in three sizes, the Model No. 14, 60,000 B.T.U., Model 20, 151,200 B.T.U., and the Model 27, 283,200 B.T.U., as rated at five pounds steam pressure 60° entering air.

The Air-Way is the quality Unit of the Unit Heater field. Heating element, fans, louvres and cabinet are aluminum. Sturdy and light-weight, the Air-Way is ideally suited to overhead suspension.

HEATING ELEMENT

The outstanding feature of the Air-Way is the integrally cast silicon aluminum heating element. There are no joints, welds, flanges, brazed or soldered connections to expand and leak. There are no contacts between core and fins to retard heat passage. Steam and water hammering cannot impair the security of the core. Each Air-Way heating element is tested with 500 lbs. hydrostatic pressure and 150 lbs. steam pressure and may be successfully operated on hot water, atmospheric vapor or steam pressure up to 250 lbs. Fins are parallel spaced to give maximum volume of warm air with a minimum current input.

As the temperature of the warm air delivered from the Air-Way is comparatively low, it is easily controlled and directed and mixes readily and thoroughly with the cool air of the space being heated before having an opportunity to rise to the ceiling. As a result it gives a more uniform temperature throughout the entire area heated.



SPECIAL MOTOR

The motor has been especially designed and built for the Air-Way Unit Heater. It is wholly enclosed, which eliminates the need for cleaning at more or less regular intervals. Dust, lint and such conditions cannot affect its operation. The motor has a special thrust bearing to carry the thrust load of the fan at operating speed and will give much longer life than any standard motor.

The motors are unconditionally guaranteed, provided they are operated on the electric current lines for which they were built, and are lubricated in accordance with instructions.

There is a definite shoulder on the motor shaft to accurately locate the fan hub; there is no need to guess at the fan location.

The electric fan is of four-blade aluminum construction secured to a steel spider and designed to economically and quietly project the greatest volume of air.

INSTALLATION

Two steamfitters can install a Unit in less than an hour, provided the piping is in good condition and reasonably accessible. The Units, with the exception of the Model 27, may be suspended direct from the overhead steam lines without the necessity for any other supports. Tapped bosses are provided on the Model 20 and 27 for hanger rods.

CAPACITY
TABLES
MODEL

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NOTE

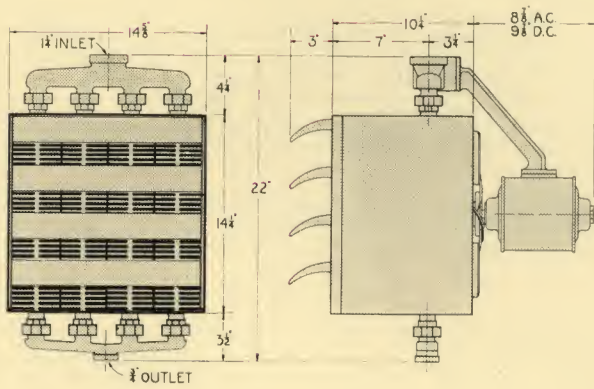
E. D. R.—Equivalent direct radiation. This is based on one square foot of cast iron radiation when supplied with steam at five lbs. pressure and exposed in still air at 70 degrees, having a heat transmission of 240 B. T. U. per hour

B. T. U.—Output per hour in British Thermal Units.

F. T.—Average final temperature of air leaving unit, in degrees Fahrenheit.

STEAM PRESSURE AND TEMPERATURE			60 CYCLE 1740 R.P.M. STANDARD FAN AIR DELIVERY 1550 C.F.M. AT 70°				60 CYCLE 1150 R.P.M. STANDARD FAN AIR DELIVERY 1020 C.F.M. AT 70°			
			INTAKE AIR TEMPERATURES				INTAKE AIR TEMPERATURES			
			ZERO	50° F.	60° F.	70° F.	ZERO	50° F.	60° F.	70° F.
2 # 218 ½°	E. D. R.	324	250	236	219	249	191	181	168	
	B. T. U.	77800	60000	56700	52700	59600	45900	43400	40300	
	F. T.	53.5	87	94.5	101.5	62.5	93	100	106.5	
	E. D. R.	338	263	250	233	258	202	191	179	
	B. T. U.	81100	63250	60000	56000	62000	48400	45900	42800	
	F. T.	55.5	89	96.5	103.5	65	95.5	102.5	109	
	10 # 239°	E. D. R.	355	280	266	250	271	214	204	192
B. T. U.	85300	67300	64000	60000	65100	51500	49000	45900		
F. T.	58.5	92	99	106	68	97.5	105	111.5		
40 # 287°	E. D. R.	426	351	338	321	326	269	258	245	
	B. T. U.	102200	84350	81100	77100	78200	64500	62000	58900	
F. T.	70	102.5	109.5	116	81.5	111	117.5	123.5		
60 # 308°	E. D. R.	456	382	367	355.	349	292	282	271	
	B. T. U.	109400	91700	88200	85300	83700	70100	67600	65100	
F. T.	75	107	113.5	121	87.5	116	122.5	129		
100 # 338°	E. D. R.	504	426	413	399	384	325	315	305	
	B. T. U.	120900	102200	99000	95800	92300	78200	75600	73200	
F. T.	83	113.5	120	127	96.5	124	130	136.5		
150 # 366°	E. D. R.	541	466	450	432	413	356	343	331	
	B. T. U.	129800	112000	107800	103800	99300	85500	82500	79300	
F. T.	89	119.5	125.5	132	103.5	131	136	142		

STEAM PRESSURE AND TEMPERATURE			25 CYCLE 1425 R.P.M. STANDARD FAN AIR DELIVERY 1266 C.F.M. AT 70°				25 CYCLE 720 R.P.M. STANDARD FAN AIR DELIVERY 640 C.F.M. AT 70°			
			INTAKE AIR TEMPERATURES				INTAKE AIR TEMPERATURES			
			ZERO	50° F.	60° F.	70° F.	ZERO	50° F.	60° F.	70° F.
2 # 218 ½°	E. D. R.	291	224	212	197	187	144	136	126	
	B. T. U.	70000	53900	51000	47400	44900	34600	32700	30400	
	F. T.	59	91	98	104.5	75	102	108	114	
	E. D. R.	303	237	224	209	195	152	144	134	
	B. T. U.	72800	56800	53900	50300	46800	36500	34600	32250	
	F. T.	61	93	100.5	106.5	78	105	111	116	
	10 # 239°	E. D. R.	319	252	240	224	204	161	154	144
B. T. U.	76600	60500	57600	53900	49100	38800	36900	34600		
F. T.	64.5	96	103	109	82	108	114	120		
40 # 287°	E. D. R.	383	316	303	288	245	203	195	185	
	B. T. U.	91800	75800	72800	69200	58900	48600	46800	44400	
F. T.	77	107.5	114.5	120.5	98	123	129	134		
60 # 308°	E. D. R.	410	343	331	319	263	220	213	205	
	B. T. U.	98500	82400	79500	76600	63200	52900	51000	49100	
F. T.	83	112.5	119.5	126	105	129	135	141		
100 # 338°	E. D. R.	454	383	371	358	290	245	238	230	
	B. T. U.	108800	91800	88900	86000	69700	58900	57100	55200	
F. T.	91.5	120	126.5	133	116	138	144	150		
150 # 366°	E. D. R.	486	410	404	389	312	269	259	249	
	B. T. U.	116700	100700	97000	93400	74800	64500	62200	59800	
F. T.	98	126.5	133	138	124	147	151	156		



Complete Weight of Unit, 85 lbs.

MOTOR CHARACTERISTICS and CURRENT CONSUMPTION

Weight Complete 85 Lbs.	Dimensions (Over All)	Height 21 3/8"	Width 14 1/2"	Depth 21 3/8"		
R.P.M.	Volts	Cycles	Phase	Motor H.P.	Full Load Amperes	
1725	110	60	1	.103	2.5	
1725	220	60	1	.103	1.3	
1140	110	60	1	.032	1.7	
1140	220	60	1	.032	.85	
1425	110	25	1	.06	1.9	
1425	220	25	1	.06	.95	
1725	220	60	3	.103	.45	
1140	220	60	3	.032	.24	
1425	220	25	3	.06	.2	
1725	440	60	3	.103	.25	
1725	550	60	3	.103	.2	
1140	440	60	3	.032	.12	
1140	550	60	3	.032	.1	
1425	440	25	3	.06	.1	
1425	550	25	3	.06	.09	
DIRECT CURRENT MOTORS						
1750	115			.103	1.1	
1750	230			.103	.6	
THREE SPEED MOTORS						
1680-1100-900	110	60		.103	2.6	
1680-1100-900	220	60		.103	1.3	
1680-1100-900	220	60		.103	1.2	

CAPACITY
TABLES
MODEL
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NOTE

E. D. R.—Equivalent direct radiation. This is based on one square foot of cast iron radiation when supplied with steam at five lbs. pressure and exposed in still air at 70 degrees, having a heat transmission of 240 B. T. U. per hour.

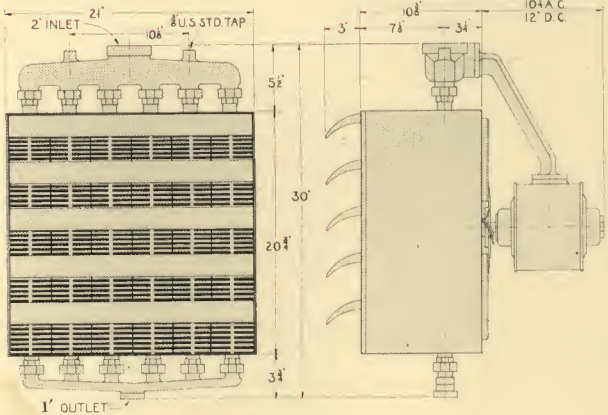
B. T. U.—Output per hour in British Thermal Units.

F. T.—Average final temperature of air leaving unit, in degrees Fahrenheit.

STEAM PRESSURE AND TEMPERATURE			60 CYCLE 1150 R.P.M. STD. FAN 25 CYCLE 1425 R.P.M. NO. 25 FAN AIR DELIVERY 3000 C.F.M. AT 70°				60 CYCLE 850 R.P.M. STANDARD FAN AIR DELIVERY 2270 C.F.M. AT 70°			
			INTAKE AIR TEMPERATURES				INTAKE AIR TEMPERATURES			
			ZERO	50° F.	60° F.	70° F.	ZERO	50° F.	60° F.	70° F.
	2# 218 ½°	E. D. R. B. T. U. F. T.	818 196300 70	630 151200 98.5	597 143200 105	554 133000 111	677 162400 76	521 125000 103	493 118400 109	457 109700 114.5
	5# 227°	E. D. R. B. T. U. F. T.	853 204500 73	664 159600 101	630 151200 107.5	588 141300 113.5	704 169000 79	548 131800 105.5	521 125000 111.5	473 116600 117.5
	10# 239°	E. D. R. B. T. U. F. T.	894 215000 76.5	707 169800 104	674 161800 111	630 151200 116.5	738 177400 83	584 140400 109.5	557 133600 115	521 125000 121
	40# 287°	E. D. R. B. T. U. F. T.	1075 258000 91.5	887 213000 118	853 204500 124	808 194200 130	887 213000 100	718 172300 123	704 169000 130	668 160500 135.5
	60# 308°	E. D. R. B. T. U. F. T.	1150 276000 98	965 231500 124	930 223000 130	894 215000 136	950 228000 107	796 191000 131	767 184000 136	738 177400 144
	100# 338°	E. D. R. B. T. U. F. T.	1270 305000 108	1075 258000 132	1038 249500 138.5	*005 241600 144.5	1048 252000 118	888 213000 140	858 206000 145	830 199300 151
	150# 366°	E. D. R. B. T. U. F. T.	1364 327500 116	1176 282500 140	1134 272200 145.5	1091 262000 151	1127 270600 127	971 233000 148.5	937 224500 153	903 216400 158
STEAM PRESSURE AND TEMPERATURE			25 CYCLE 720 R.P.M. NO. 25 FAN AIR DELIVERY 1510 C.F.M. AT 70°				25 CYCLE 720 R.P.M. STANDARD FAN AIR DELIVERY 1880 C.F.M. AT 70°			
			INTAKE AIR TEMPERATURES				INTAKE AIR TEMPERATURES			
			ZERO	50° F.	60° F.	70° F.	ZERO	50° F.	60° F.	70° F.
	2# 218 ½°	E. D. R. B. T. U. F. T.	530 127200 90	408 97900 112.5	385 92700 118	358 86000 122.5	606 145300 82.5	467 112000 107	441 105800 113	409 98400 118
	5# 227°	E. D. R. B. T. U. F. T.	556 132300 93.5	430 103300 116	408 97900 121	380 91200 126	632 151400 86	492 118000 110	467 112000 116	436 104500 121.5
	10# 239°	E. D. R. B. T. U. F. T.	579 138900 98	458 109800 120	437 104700 125.5	408 97900 130	663 159000 90	524 125700 114	499 119700 120	467 112000 125
	40# 287°	E. D. R. B. T. U. F. T.	695 166800 117.5	573 137600 137.5	556 132300 143	523 125700 147	796 190800 108	657 157600 130	632 151400 136	598 143700 140.5
	60# 308°	E. D. R. B. T. U. F. T.	745 178800 126	623 149500 145.5	603 144300 150	579 138900 155	853 204200 116	713 171000 137	687 164800 142.5	663 159000 148
	100# 338°	E. D. R. B. T. U. F. T.	823 197200 139	695 166800 156	673 161400 161	651 156200 165.5	940 225700 128	795 190800 147	770 184800 153	744 178700 158
	150# 366°	E. D. R. B. T. U. F. T.	882 211500 149	761 182600 166	733 176000 170	705 169300 173.5	1012 242400 137	872 209000 157	840 201500 161	808 193800 165

MOTOR CHARACTERISTICS and CURRENT CONSUMPTION

Weight Complete 180 Lbs.	Dimensions (Over All)	Height 29 3/4"	Width 21"	Depth 22 1/2"	
R.P.M.	Volts	Cycles	Phase	Motor H.P.	Full Load Amperes
1140	110	60	1	.24	5.3
1140	220	60	1	.24	2.8
850	110	60	1	.102	2.8
850	220	60	1	.102	1.2
1425	110	25	1	.24	5.3
1425	220	25	1	.24	2.7
1140	220	60	3	.24	.9
850	220	60	3	.102	.7
1425	220	25	3	.24	1.3
1140	440	60	3	.24	.5
1140	550	60	3	.24	.4
850	440	60	3	.102	.35
850	550	60	3	.102	.28
1425	440	25	3	.24	.7
1425	550	25	3	.24	.6
DIRECT CURRENT MOTORS					
1140	115			.24	2.4
1140	230			.24	1.2
1140	550			.24	.5
THREE SPEED MOTORS					
1100-900-700	110	60	1	.24	3.4
1100-900-700	220	60	1	.24	2.3
1100-900-700	220	60	3	.24	1.2
1100-900-700	440	60	3	.24	.55
TWO SPEED MOTORS					
1425-720	110	25	1	.24	5.0
1425-720	220	25	3	.24	1.3
1425-720	440	25	3	.24	.7



Complete Weight of Unit, 180 lbs.

CAPACITY TABLES MODEL

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NOTE

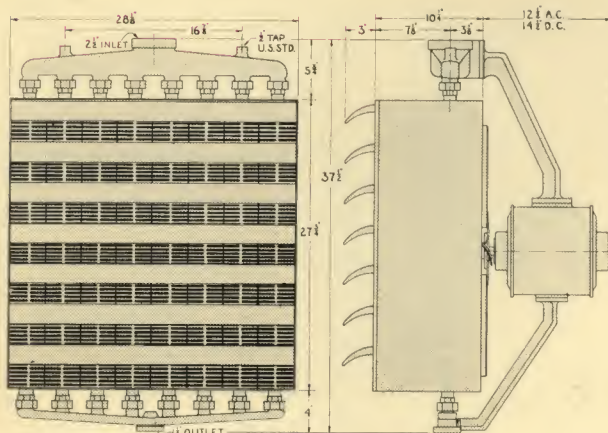
E. D. R.—Equivalent direct radiation. This is based on one square foot of cast iron radiation when supplied with steam at five lbs. pressure and exposed in still air at 70 degrees, having a heat transmission of 240 B. T. U. per hour.

B. T. U.—Output per hour in British Thermal Units.

F. T.—Average final temperature of air leaving unit, in degrees Fahrenheit.

			60 CYCLE 1150 R.P.M. STD. FAN 25 CYCLE 1425 R.P.M. NO. 25 FAN AIR DELIVERY 6000 C.F.M. AT 70°				60 CYCLE 850 R.P.M. STANDARD FAN AIR DELIVERY 4450 C.F.M. AT 70°			
			INTAKE AIR TEMPERATURES				INTAKE AIR TEMPERATURES			
			ZERO	50° F.	60° F.	70° F.	ZERO	50° F.	60° F.	70° F.
STEAM PRESSURE AND TEMPERATURE	2# 218.5°	E. D. R. B. T. U. F. T.	1533 367500 68.5	1179 283200 97.5	1116 268000 104.5	1036 248600 110	1268 304500 75.5	978 234500 102.5	926 222000 108.5	858 206000 114.5
	5# 227°	E. D. R. B. T. U. F. T.	1595 382700 71.5	1243 298500 100	1179 283200 107	1100 264000 112.5	1320 317000 78.5	1032 247500 105.5	978 234500 111	913 219000 117
	10# 239°	E. D. R. B. T. U. F. T.	1675 402500 75	1325 318000 103.5	1261 302500 110	1179 283200 116	1387 333000 82.5	1096 263000 109	1044 250500 115	978 234500 120.5
	40# 287°	E. D. R. B. T. U. F. T.	2010 483000 90	1660 398500 117	1595 382700 123	1513 363500 129	1664 399500 99	1375 330000 124	1320 317000 129.5	1255 301000 134.5
	60# 308°	E. D. R. B. T. U. F. T.	2150 517000 96.5	1805 433000 123	1740 417000 129	1675 402000 135	1782 428000 106	1492 358500 130	1445 347500 136	1387 333000 141.5
	100# 338°	E. D. R. B. T. U. F. T.	2375 571000 106.5	2010 483000 131	1945 467000 137	1883 452000 143	1970 473000 117	1664 399500 139	1613 387000 145	1560 374500 150.5
	150# 366°	E. D. R. B. T. U. F. T.	2550 613000 114	2195 528000 139	2120 509000 144	2042 490000 149.5	2110 507000 125	1825 437500 148	1758 422000 152	1693 406000 157.5

			25 CYCLE 720 R.P.M. NO. 25 FAN AIR DELIVERY 3010 C.F.M. AT 70°				25 CYCLE 720 R.P.M. STANDARD FAN AIR DELIVERY 3860 C.F.M. AT 70°			
			INTAKE AIR TEMPERATURES				INTAKE AIR TEMPERATURES			
			ZERO	50° F.	60° F.	70° F.	ZERO	50° F.	60° F.	70° F.
STEAM PRESSURE AND TEMPERATURE	2# 218.5°	E. D. R. B. T. U. F. T.	983 236000 88	759 182000 111	718 172200 116.5	667 159800 121.5	1150 270300 80.5	868 208200 106	822 197000 112	763 183000 117.5
	5# 227°	E. D. R. B. T. U. F. T.	1050 246000 91.5	800 192000 114.5	759 182000 120	707 169600 125	1172 281500 84	915 219500 109	868 208200 115	810 194300 120.5
	10# 239°	E. D. R. B. T. U. F. T.	1077 258500 96.5	852 204200 118.5	810 194400 124	759 182000 128.5	1230 295500 88	973 233700 113	928 222400 118.5	868 208200 124
	40# 287°	E. D. R. B. T. U. F. T.	1292 310000 115	1065 255800 137	1050 246000 141	975 233700 145.5	1476 354400 105.5	1220 293000 129	1172 281500 134	1114 267500 139
	60# 308°	E. D. R. B. T. U. F. T.	1384 332000 124	1156 278000 143	1116 268000 148	1077 258500 153.5	1580 379500 113	1324 318000 135.5	1275 306500 141	1230 295500 146
	100# 338°	E. D. R. B. T. U. F. T.	1528 366500 136	1292 310000 154	1250 300000 159	1210 290500 164	1745 419000 125	1476 354400 145.5	1433 343500 150.5	1385 332000 157
	150# 366°	E. D. R. B. T. U. F. T.	1640 394000 147	1413 339500 164	1363 327500 167	1312 314500 171	1875 450000 134	1620 388500 154	1557 374000 159	1500 360000 163



Complete Weight of Unit, 293 lbs.

MOTOR CHARACTERISTICS and CURRENT CONSUMPTION

Weight Complete 293 Lbs.	Dimensions (Over All)	Height 36 5/8"	Width 28"	Depth 26 1/2"	
R.P.M.	Volts	Cycles	Phase	Motor H.P.	Full Load Amperes
1140	110	60	1	.625	8.0
1140	220	60	1	.625	4.2
850	110	60	1	.26	8.5
850	220	60	1	.26	4.0
1140	220	60	3	.625	2.4
1140	440	60	3	.625	1.25
1140	550	60	3	.625	1.00
850	220	60	3	.26	1.2
850	440	60	3	.26	.6
850	550	60	3	.26	.5
1425	220	25	3	.625	1.8
1425	440	25	3	.625	.9
720	220	25	3	.16	.65
720	440	25	3	.16	.35
DIRECT CURRENT MOTORS					
1140	115			.625	5.5
1140	230			.625	2.8
1140	550			.625	1.2
THREE SPEED MOTORS					
1100-900-700	220	60	3	.625	2.5
1100-900-700	440	60	3	.625	1.25
1100-900-700	550	60	3	.625	1.00
TWO SPEED MOTORS					
1425-720	220	25	3	.625	2.0
1425-720	440	25	3	.625	1.0
1425-720	550	25	3	.625	.8

LIST PRICE AIR-WAY UNIT HEATERS

Model 27-A Air-Way Unit Heater Fan 24 in. Diameter

Weight Complete 293 Lbs.	Dimensions (Over All)	Height 36 $\frac{3}{8}$ "	Width 28"	Depth 26 $\frac{1}{2}$ "	
R.P.M.	Volts	Cycles	Phase	Motor H.P.	List Price
High Starting Current, Single Phase Motors, for use only by permission of Central Station or in plants that generate their own power that have no starting current requirements.					
1140	110	60	1	.625	\$270.00
1140	220	60	1	.625	270.00
850	110	60	1	.26	270.00
850	220	60	1	.26	270.00
1425	110	25	1	.625	270.00
1425	220	25	1	.625	270.00
Single Phase Motors approved by all Central Stations					
1140	110	60	1	.625	\$285.00
1140	220	60	1	.625	285.00
850	110	60	1	.26	285.00
850	220	60	1	.26	285.00
1425	110	25	1	.625	300.00
1425	220	25	1	.625	300.00
POLY PHASE MOTORS					
1140	220	60	2-3	.625	280.00
1140	440	60	2-3	.625	280.00
1140	550	60	2-3	.625	285.00
850	220	60	2-3	.26	285.00
850	440	60	2-3	.26	285.00
850	550	60	2-3	.26	285.00
1425	220	25	2-3	.625	285.00
1425	440	25	2-3	.625	285.00
DIRECT CURRENT MOTORS					
1140	115			.625	\$285.00
1140	230			.625	285.00
THREE SPEED MOTORS					
1100-900-700	110	60	1	.625	\$315.00
1100-900-700	220	60	1	.625	315.00
1100-900-700	220	60	3	.625	300.00
1100-900-700	440	60	3	.625	300.00
1100-900-700	550	60	3	.625	300.00
TWO SPEED MOTORS					
1425-720	220	25	3	.625	\$325.00
1425-720	440	25	3	.625	325.00

NOTE— Complete Shipping Weight of Unit, less Motor.....298 Lbs.
Shipping Weight of 110V, 60 cycle, single phase Motor.....69 Lbs.
Shipping Weight of 115 V, D. C., single phase Motor.....82 Lbs.
Shipping weight of 220 V, 60 cycle, 3 phase Motor.....80 Lbs.
Shipping weight 220 V. 60 cycle, 3 phase, 3 speed Motor with control box.....111 Lbs.

Model 20-A Air-Way Unit Heater Fan 19 in. Diameter

Weight Complete 180 Lbs.	Dimensions (Over All)	Height 29 $\frac{1}{4}$ "	Width 21"	Depth 22 $\frac{3}{8}$ "	
R.P.M.	Volts	Cycles	Phase	Motor H.P.	List Price
High Starting Current, Single Phase Motors for use only by permission of Central Station or in plants that generate their own power that have no starting current requirements.					
1140	110	60	1	.24	\$150.00
1140	220	60	1	.24	150.00
850	110	60	1	.102	150.00
850	220	60	1	.102	150.00
Single Phase Motors approved by all Central Stations					
1140	110	60	1	.24	\$165.00
1140	220	60	1	.24	165.00
850	110	60	1	.102	165.00
850	220	60	1	.102	165.00
1425	110	25	1	.24	165.00
1425	220	25	1	.24	165.00
POLY PHASE MOTORS					
1140	220	60	2-3	.24	160.00
850	220	60	2-3	.102	160.00
1425	220	25	2-3	.24	160.00
1140	440	60	2-3	.24	160.00
1140	550	60	2-3	.24	165.00
850	440	60	2-3	.102	160.00
850	550	60	2-3	.102	165.00
1425	440	25	2-3	.24	165.00
1425	550	25	2-3	.24	165.00
DIRECT CURRENT MOTORS					
1140	115			.24	\$165.00
1140	230			.24	165.00
THREE SPEED MOTORS					
1100-900-720	110	60	1	.24	\$180.00
1100-900-720	220	60	1	.24	180.00
1100-900-720	220	60	3	.24	175.00
1100-900-720	440	60	3	.24	180.00
TWO SPEED MOTORS					
1425-700	110	25	1	.24	\$185.00
1425-700	220	25	3	.24	185.00
1425-700	440	25	3	.24	185.00

NOTE— Complete Shipping Weight of Unit, less Motor.....182 Lbs.
Shipping Weight of 110 V, single phase, 60 or 25 cycle Motor.....55 Lbs.
Shipping Weight of 115 V, D. C. Motor.....41 Lbs.
Shipping Weight of 110 V, single phase, 60 cycle, 3 speed Motor with control box.....71 Lbs.
Shipping Weight of 220 V, 60 cycle, 3 speed Motor with control box.....86 Lbs.

Model 14-A Air-Way Unit Heater Fan 12 in. Diameter

Weight Complete 85 Lbs.	Dimensions (Over All)	Height 21 $\frac{1}{8}$ "	Width 14 $\frac{1}{2}$ "	Depth 21 $\frac{3}{8}$ "	
R.P.M.	Volts	Cycles	Phase	Motor H.P.	List Price
1725	110	60	1	.103	\$100.00
1725	220	60	1	.103	100.00
1140	110	60	1	.032	100.00
1140	220	60	1	.032	100.00
1425	110	25	1	.06	100.00
1425	220	25	1	.06	100.00
1725	220	60	3	.103	100.00
1140	220	60	3	.032	100.00
1425	220	25	3	.06	105.00
1725	440	60	3	.103	105.00
1725	550	60	3	.103	105.00
1140	440	60	3	.032	105.00
1140	550	60	3	.032	105.00
1425	440	25	3	.06	105.00
1425	550	25	3	.06	105.00

R.P.M.	Volts	Cycles	Phase	Motor H.P.	List Price
DIRECT CURRENT MOTORS					
1750	115			.103	\$105.00
1750	230			.103	105.00
THREE SPEED MOTORS					
1680-1100-900	110	60	1	.103	\$115.00
1680-1100-900	220	60	1	.103	115.00
1680-1100-900	220	60	3	.103	115.00

NOTE— Complete Shipping Weight of Unit, less Motor 85 Lbs.
Shipping Weight of 110 or 220 V, single phase, 60 or 25 cycle, A.C. or 110 V, D.C. Motor.....23 Lbs.
Shipping Weight of 110 V, single phase, 60 cycle, 3 speed motor with control box.....38 Lbs.
Shipping Weight of 220 V, 3 phase, 60 cycle, A.C. 3 speed motor with control box.....61 Lbs.

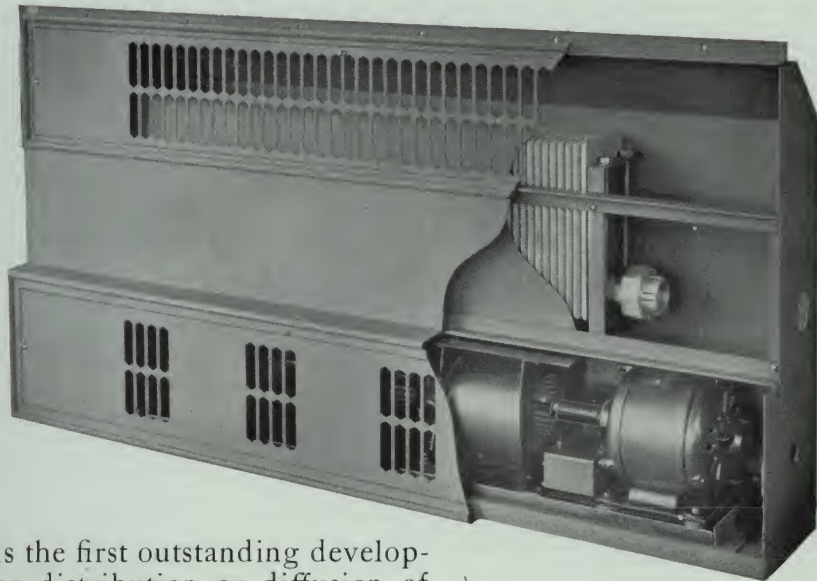
LIST PRICE AIR-WAY UNIT HEATERS

Model 14-A Air-Way Unit (Rear)

Feb 12 in Diameter

The Built-In *Air-Way* AERIET Heating Unit For Steam, Vapor or Hot Water Systems

Cut-away view of the AERIET showing motor, one of the fans, baffle plate, grilles and heating element.



The Air-Way AERIET is the first outstanding development in equipment for the distribution or diffusion of heat in homes, offices, etc., since steam and hot water radiators first came into use forty years ago. Heat is distributed within confined areas by means of air circulation and if nature's law, gravity air circulation, is depended upon to carry heat from the heating Unit into the living zone of the room, then the upper areas must be heated far above the degree of comfort required within the living zone.

Effective heating or heat utilization denotes the placing of heat within the living zone. Air-Way AERIET is designed for the distribution and control of heat in the living zone.

The Air-Way AERIET is a built-in heating unit which may be used in either a steam, vapor or hot water heating system in place of the unsightly and inefficient radiators. The complete assembly consists of an aluminum alloy heating unit combined with a multi-unit noiseless electric fan assembly, in a cabinet built for installation between joists in the wall, with two exterior grilles, one a cold air intake grille and one a warm air outlet grille. The styles available are illustrated on pages 9, 10 and 11.

The AERIET is installed in units of standard size, connecting to the same piping system as the ordinary steam or hot water radiator.

This built-in heating unit releases for practical use or decorative purposes the space otherwise required for radiators and registers. Being flush with the wall no floor space is required. The grilles are designed so as to fit into almost any plan of decoration and may be treated by the decorator to harmonize with any scheme.

Air-Way AERIET is a compact, efficient mechanism, complete within itself, for distributing and diffusing heat, supplying a constant stream of warmed air into the living zone of the room. It is controlled by a manually operated switch, thereby selecting any one of the three heat capacities, and in addition may be controlled at any one of the heat capacities by a simple electrically operated thermostat. By its very operation, taking from the floor level the cooled air, heating it, and returning it to the living zone, it produces circulation of air within the room, preventing air stagnation.

Air-Way AERIET is an entirely new, modern, efficient and economical method of solving heating problems which makes obsolete the cumbersome, inefficient, unsightly and space-consuming heating equipment previously used.



What The *Air-Way* AERIET Will Do

The lower third or half of the ordinary room is the portion in which we live and work. In heating, it is with the maintenance of a comfortable temperature in this portion of the room that we are concerned. The principle that warm air rises is too well known to require discussion. Therefore it will be readily understood that with ordinary radiation, both floor and concealed type, the air immediately surrounding the radiator, becoming heated, rises until it strikes the ceiling, there forming a blanket increasing in thickness until it extends down to the lower levels of the room. Thus the upper portion is warmed first, and remains warmer at all times than the lower.

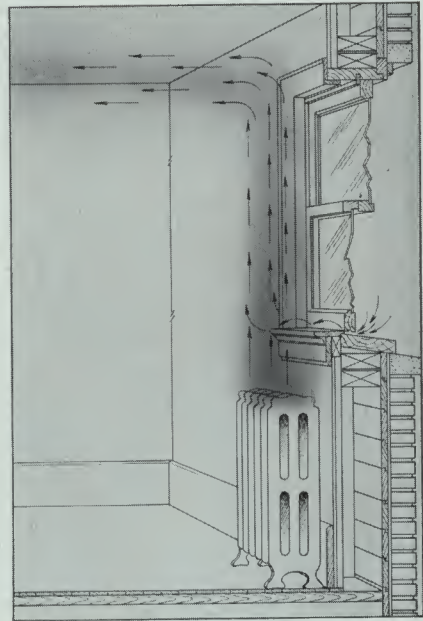
The Air-Way AERIET, because of the mechanical diffusion of the heated air, heats by convection the lower or middle section of the room first. The AERIET with its three heating capacities heats more quickly because a stream of warmed air is forced directly out into the working or living zone of the room. The economy in heating this section rather than the upper unused section is also worthy of note.

The two illustrations on this page contrast the two methods of heating.

Air-Way AERIET, with its positive circulation of the air within each room, produces a more healthful atmosphere in which to live.

The principle of heat utilization upon which the Air-Way AERIET is based is of importance to the owner as a means of saving fuel. In addition the variation in heat delivery secured by means of changing motor speeds is a positive means of delivering just the exact amount of heat into the room as called for by outdoor weather conditions. The Air-Way AERIET Unit is provided with a three speed motor so that by merely turning the switch on wall adjacent to the Unit the fans may be operated at high, intermediate or low speed.

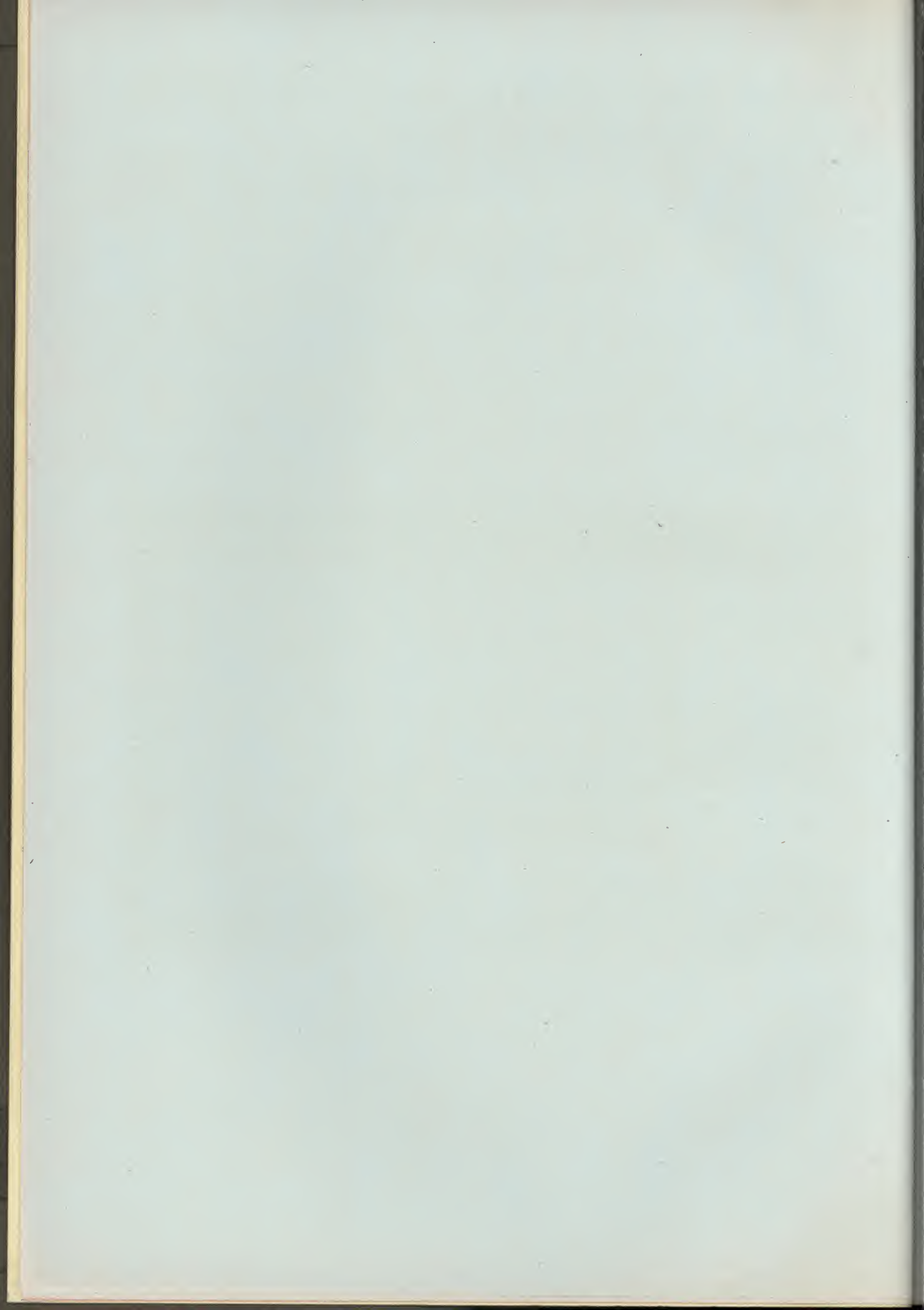
The capacity of a heating system must always be based on maintaining proper room temperatures during the most extreme winter weather. Therefore, with present type heating systems, excess capacity is provided during normal conditions. However the AERIET can be regulated in its heat delivery as easily as artificial lighting is controlled. When it is required to heat a room quickly after a period of unoccupancy, the Unit can be operated at high speed for a short time, thus giving a large volume of heat until the room has reached proper temperature, and then changed to low speed. This feature is of great importance for guest rooms of homes, and hospital, apartment and hotel rooms, or any room which may be unoccupied during a portion of each day.



Heating by the old fashioned Radiator. The air surrounding the radiator is heated and rises to the ceiling discoloring the walls, and forming a layer of warmed air which gradually increases until it reaches down to the lower or living zone of the room. There is no positive circulation of the air in the room.



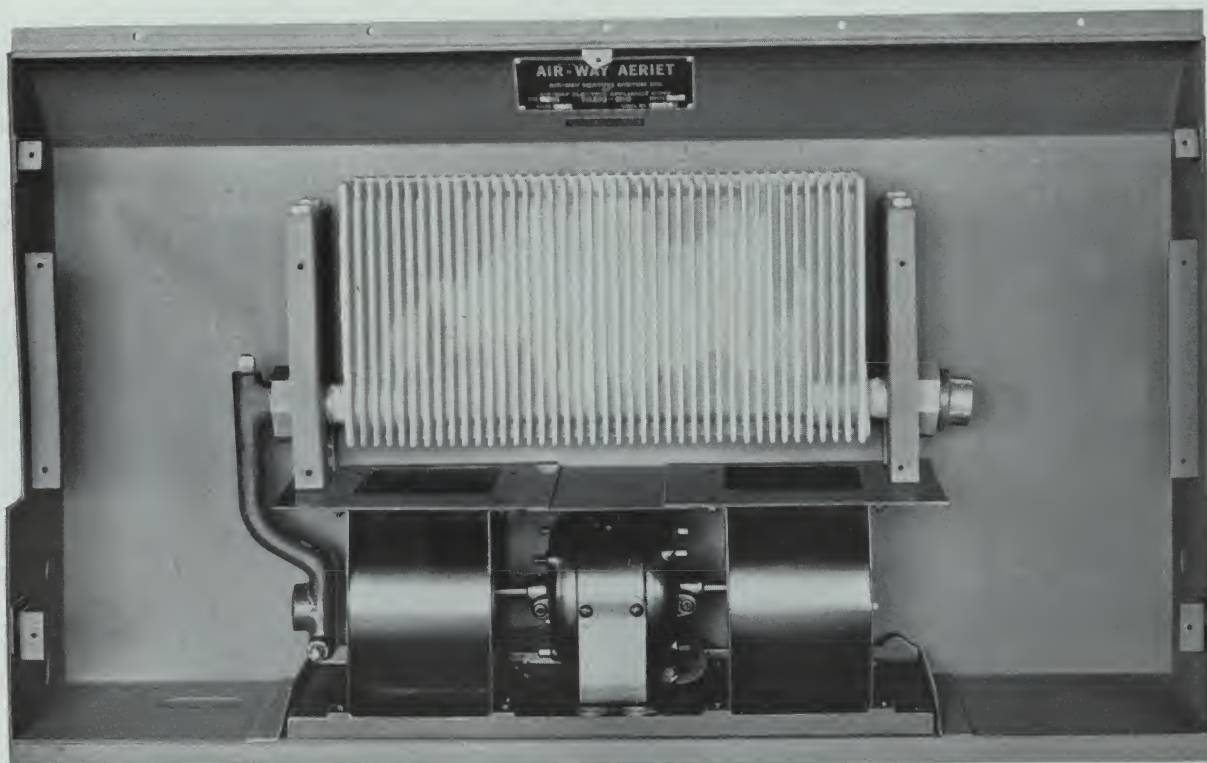
Heating with the Air-Way AERIET. The air is drawn into the AERIET from the floor level, blown through the heating unit, and a stream of warmed air is sent out into the living zone of the room. Here there is positive mechanical circulation of the air in the room plus heating by convection which alone is 25% more efficient than heating by radiation.



Air-Way AERIET will heat the hard-to-heat room on the windward side of the house or building. The under-door draft from the outside is gathered in by a properly placed AERIET, and the air, heated, is sent out into the room.

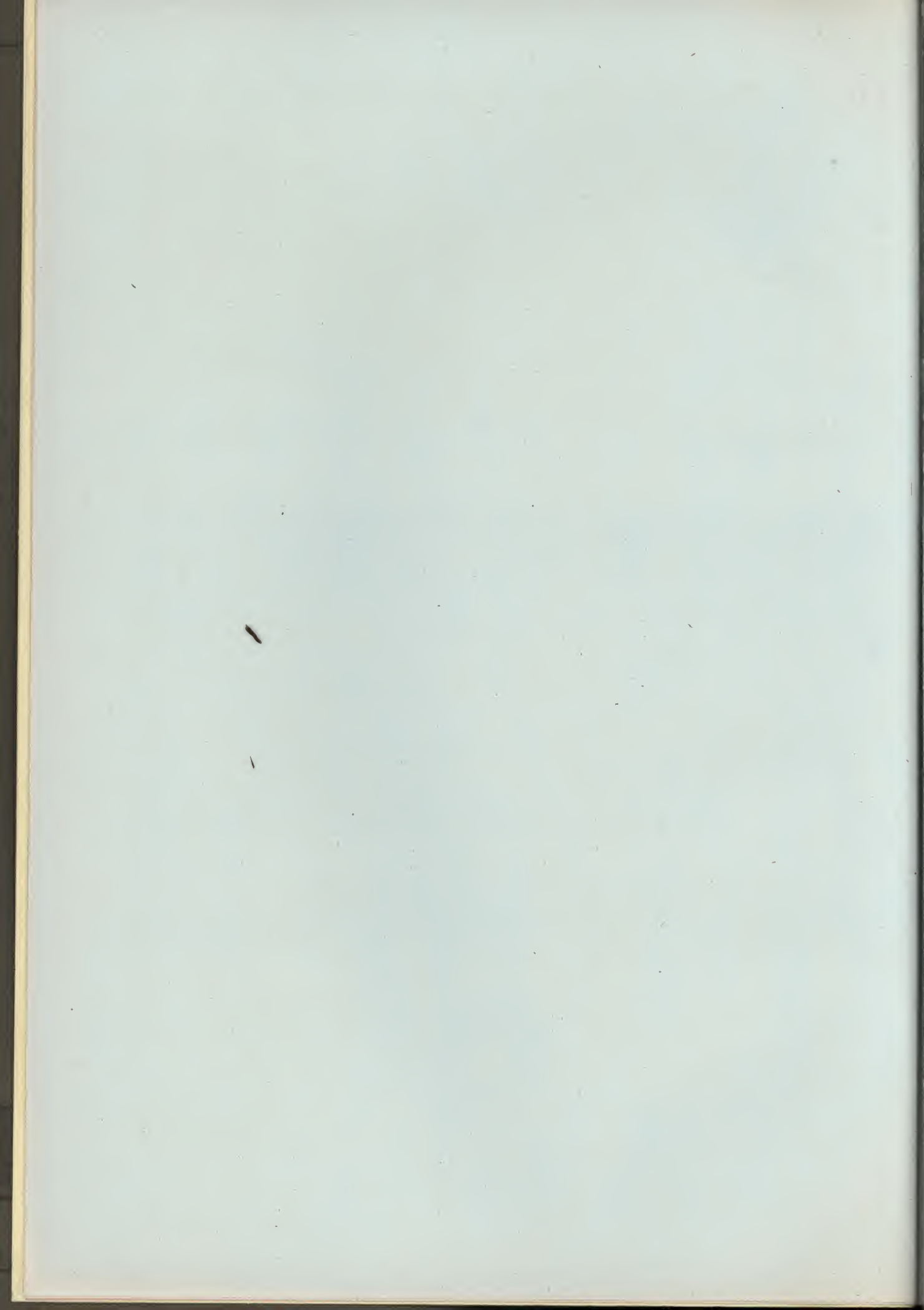
Not only is the Air-Way AERIET concealed within the building walls; but the total weight of the Unit including cabinet, heating element, fans and motor is one-fourth the weight of a cast iron radiator of equal capacity.

Authorities agree that often 20% of the total fuel cost of heating is wasted by overheating caused by lack of positive control of the delivery of heat in individual rooms. Controlling the delivery of heat in the rooms by controlling the operation of the boiler drafts, oil or gas burners does not mean control of room temperature, as, due to changeable wind conditions, the heat required in all rooms is not in the same proportion. The Air-Way AERIET is designed to operate under the full control of a simple electric thermostat, individually in each room or in groups arranged with regard to nature of occupancy. Under such control, the AERIET will maintain an even predetermined temperature without further attention regardless of the direction or velocity of wind or outdoor temperature providing proper steam or hot water supply is maintained to the Unit.



View of Model 14 Air-Way Steam or Vapor AERIET—(Front panels removed)

Note the accessibility of all parts of the unit and the ample space provided inside of the cabinet at the supply and return end of the heating element for installation of all piping connections, shut-off valve, air vent valve or thermostatic trap. Cooling pocket with union fitting on return end and union fitting on supply end furnished with AERIET.



How The *Air-Way* AERIET Does Its Work

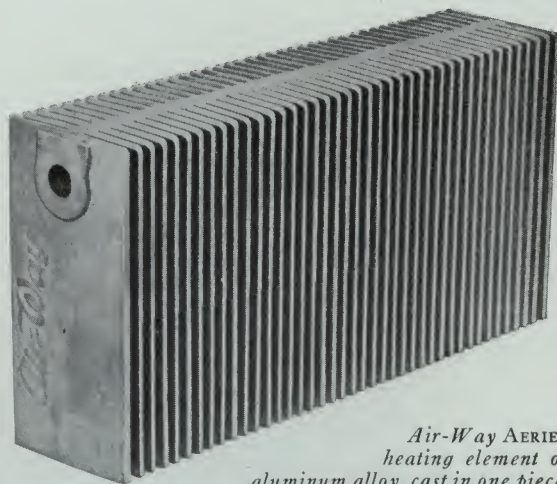
The heating element in the Air-Way AERIET is of aluminum alloy, cast in one piece. In appearance it resembles a miniature radiator. There are no welded, soldered, brazed or expanded joints of any kind, so expansion or contraction strains or stresses cannot damage it in any way. Scientifically designed, so as to provide the maximum radiating surface with compactness of construction, it is tested to 160 pounds steam pressure and 500 pounds cold water hydraulic pressure before it leaves the factory.

Steam or hot water piping connections are readily accessible and can be arranged to fit into all types of building construction.

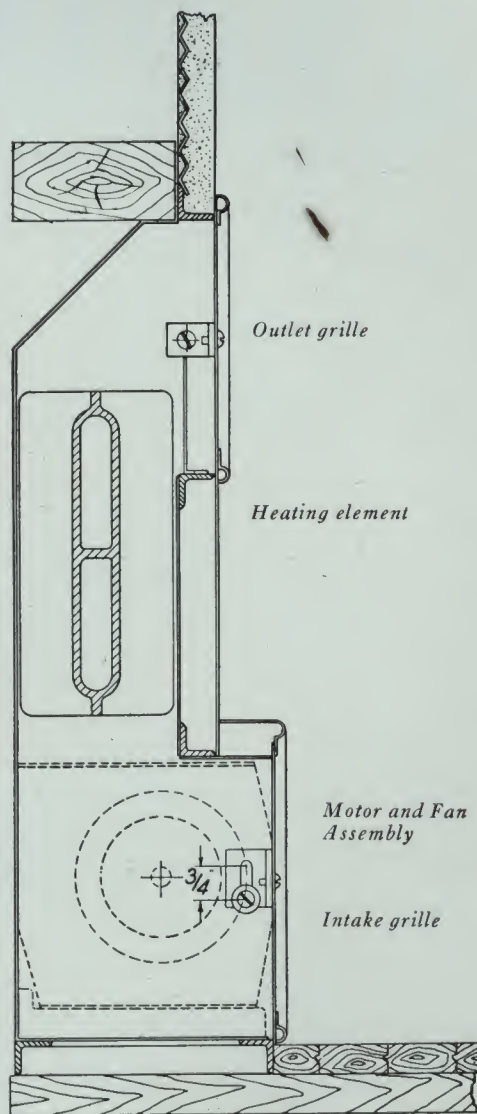
Just back of the inlet or cold air grille is a small, noiseless, electric motor which operates fans below the heating element. The motor is of a special type, and is built to operate at high, intermediate and low speeds. The motor speed is controlled by switches mounted adjacent to the unit. The fans draw in the air, usually from the floor level of the room, force it up past the heating unit, between the fins, where it is warmed, and directs it through the outlet grille into the living zone.

The warmed air discharged from the Unit is directed by properly designed baffles and the velocity given by the motor driven fans is sufficient to overcome the tendency of the warmed air to rise immediately to the ceiling of the room. This velocity, however, is not great enough to be objectionable to occupants sitting near the outlet. Due to the horizontal flow of the warm air stream, smudging or streaking of walls and ceiling areas over the Unit is practically eliminated. This horizontal velocity insures a steady stream of warmed air entering and traveling across the room in the living zone.

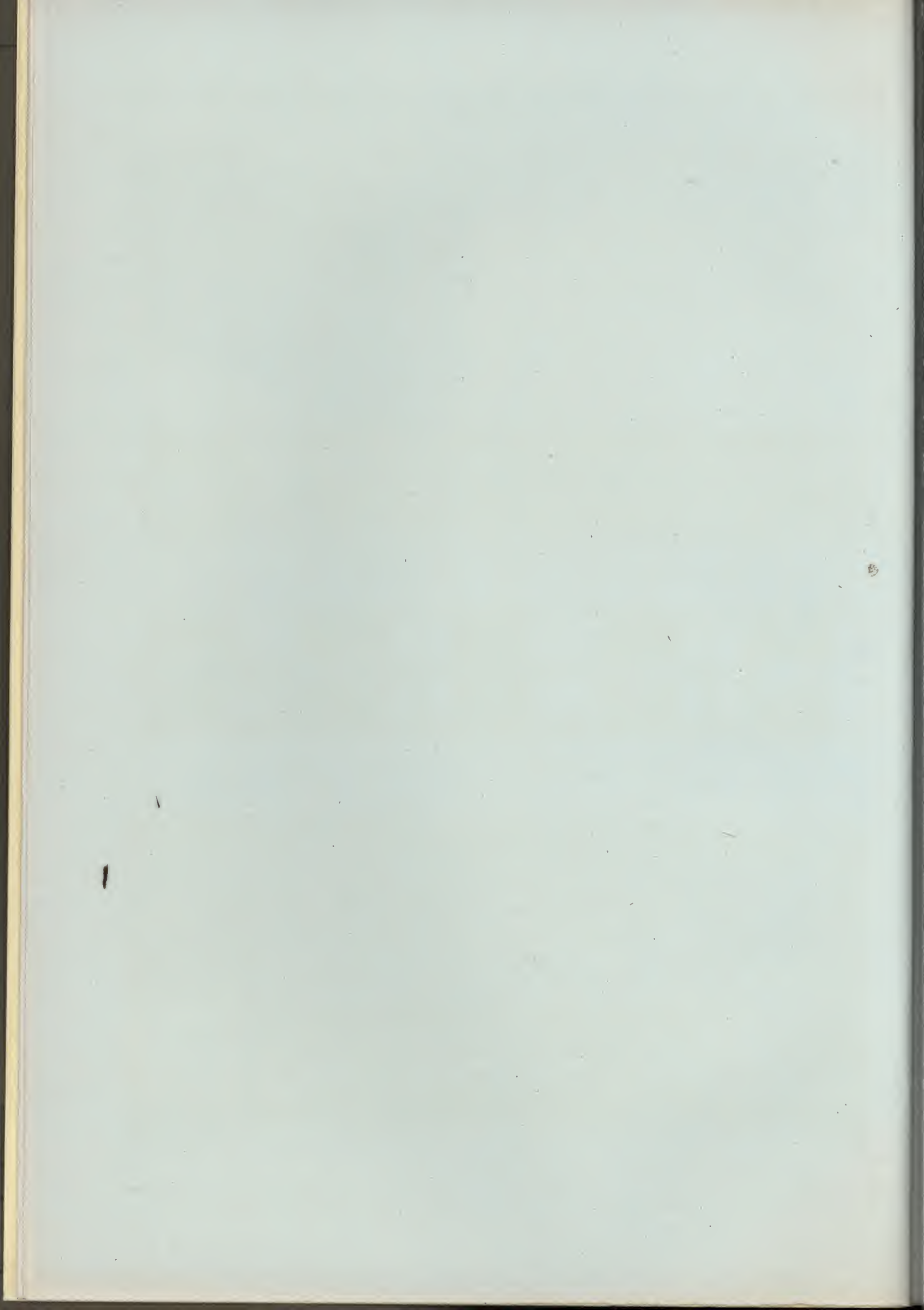
The current required to operate even the largest AERIET motors is but a fraction of the current required for one light bulb. (See Engineering



*Air-Way AERIET
heating element of
aluminum alloy, cast in one piece.*



*End section drawing of Air-Way AERIET,
offset front type*

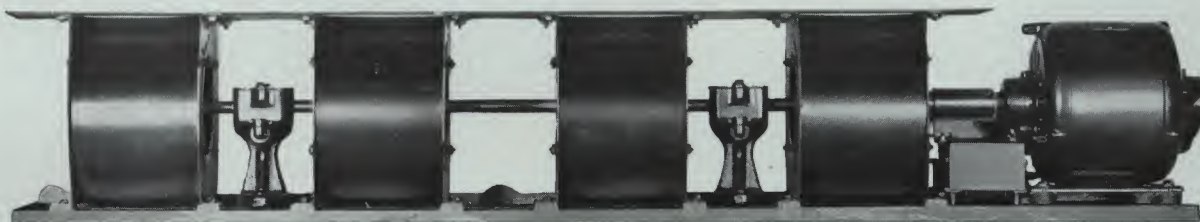


Data, Section 200, Page 17.) This is especially true for the normal or slow speed operation.

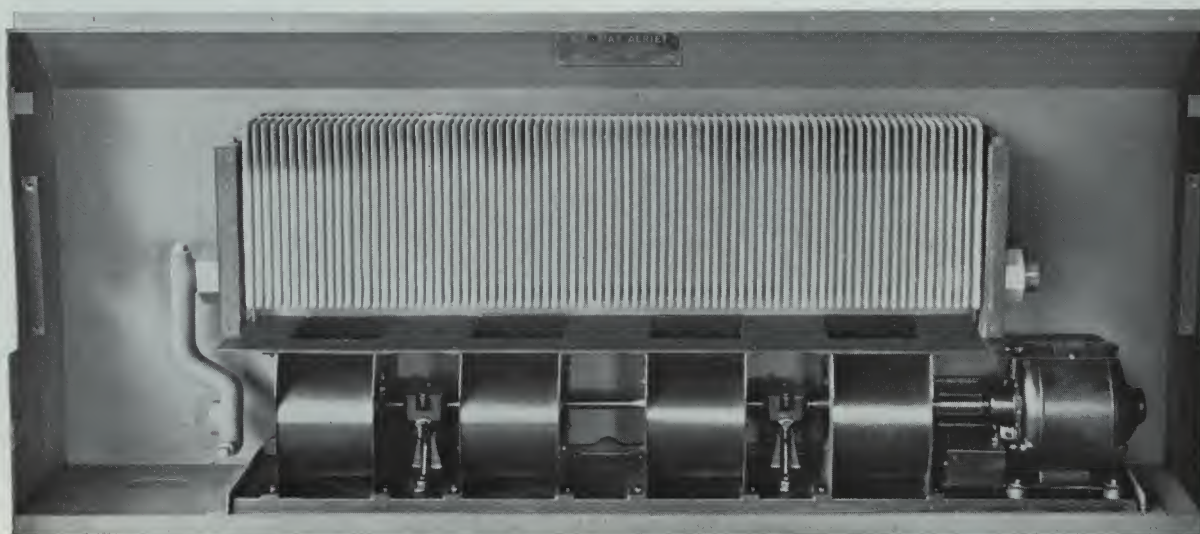
The Air-Way AERIET is available either for manual or automatic control. The manual control type is designed for the Unit to be controlled by the room occupant, but the automatic control type may be under the full control of the electric thermostat in the room or by a central thermostat. With either type, the selective switch for motor speed is furnished for mounting adjacent to each Unit. An advantage of the AERIET which cannot be secured with any other type of heating Unit designed for the same purpose is its adaptability to any type control system and its immediate response in heat delivery to the demands of the control. Heat delivery can be regulated by controlling motor circuit, or modulation control can be used which entirely eliminates air stratification.



Top View of Fan and Motor Assembly—Model 27 AERIET (Four Fan Unit)

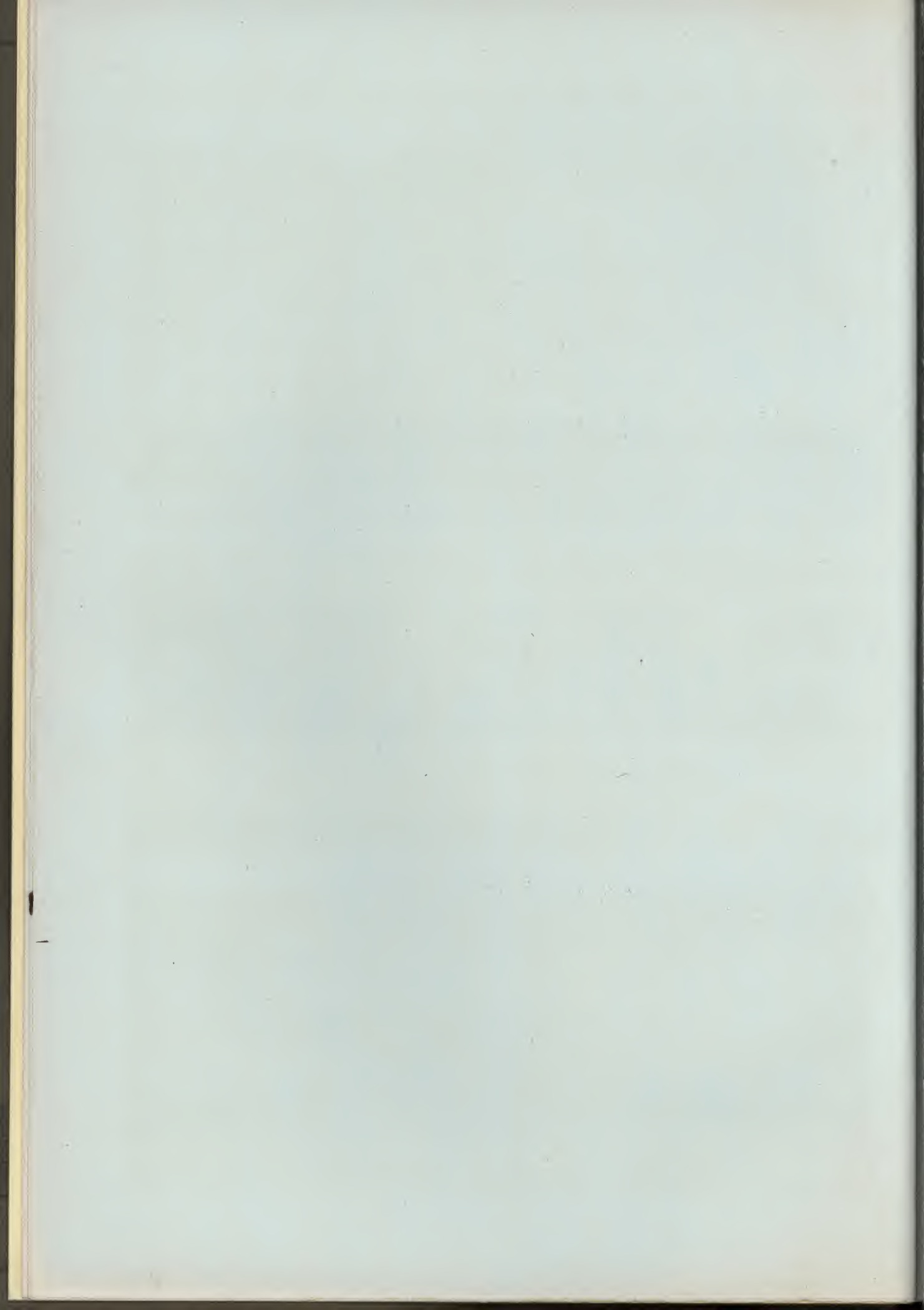


Front View of Fan and Motor Assembly—Model 27 AERIET (Four Fan Unit)



Front View of Model 27 Air-Way Steam or Vapor AERIET with front panels removed

Note accessibility, ample space for piping connections, flexible coupling between fans and motor and also oversize construction of fan shaft bearings with oil supply of sufficient quantity for an entire heating season.



Where The *Air-Way* AERIET Can Be Used

Wherever dependable, economical diffusion of heat with positive control is desired, and especially where floor space is at a premium, the Air-Way AERIET is the most efficient method now in use. It is unexcelled in homes, apartment houses, hotels, clubs, lodgerooms, schools, dormitories, hospitals, sanitariums, offices, banks, restaurants and stores. It is particularly adapted for churches, art galleries and museums, due to positive air circulation reducing to a minimum the smudging or streaking of valuable objects of art.

It is inconspicuous, lending itself to any decorative scheme, adaptable, fitting into almost any kind of arrangement, and silent in operation. Air-Way AERIET is the very last word in heating engineering.



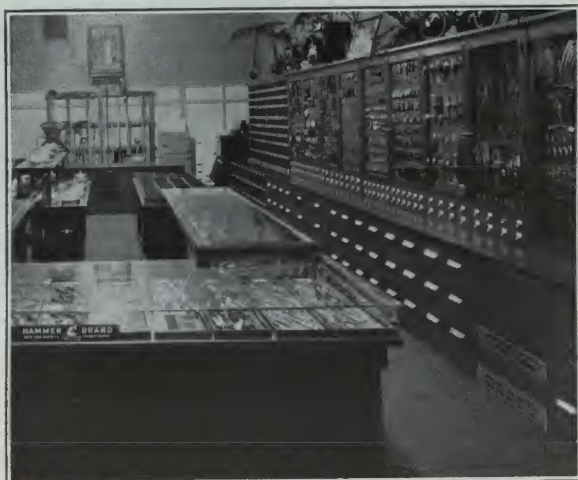
A typical Air-Way AERIET Installation in the Home



Air-Way AERIET Installed in the Hospital



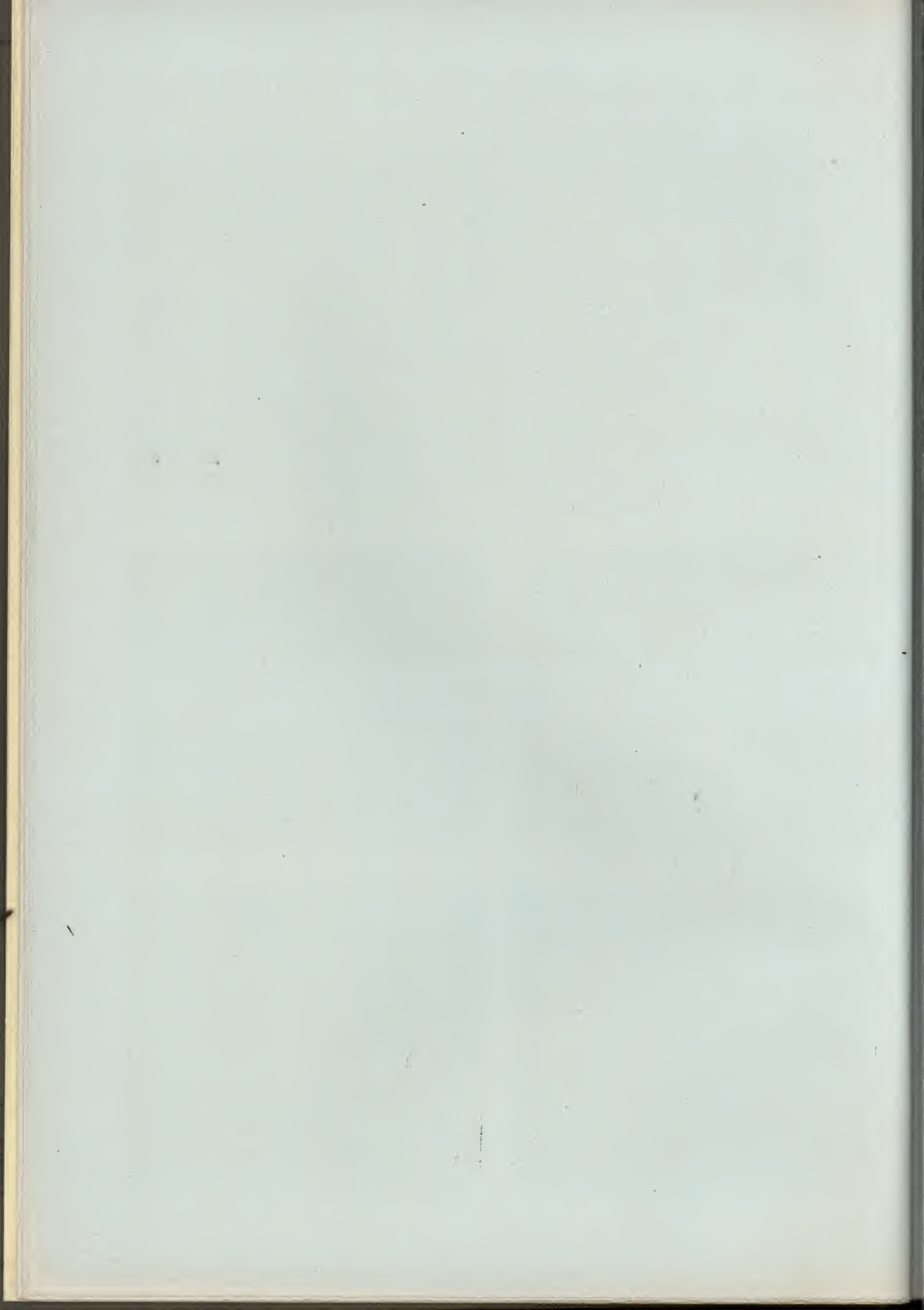
Heating the Nursery with an Air-Way AERIET



A Retail Store Installation of Air-Way AERIET



Air-Way AERIET is a Space-Saver in the Office



Heating the Finer Type of Homes With *Air-Way* AERIET



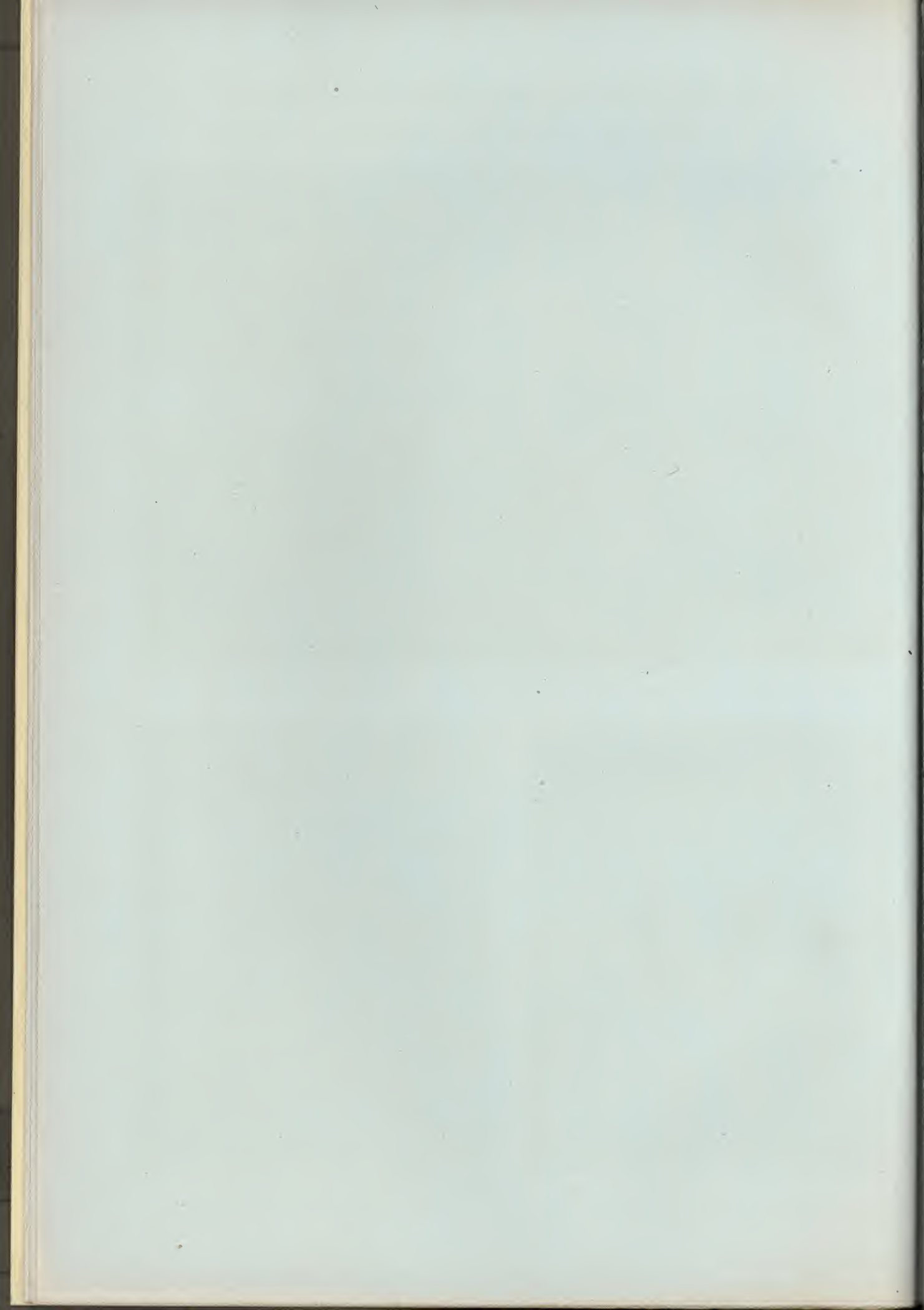
Fresh air from the windows is warmed and breathed into the room by Air-Way AERIETS installed under the bedroom windows.



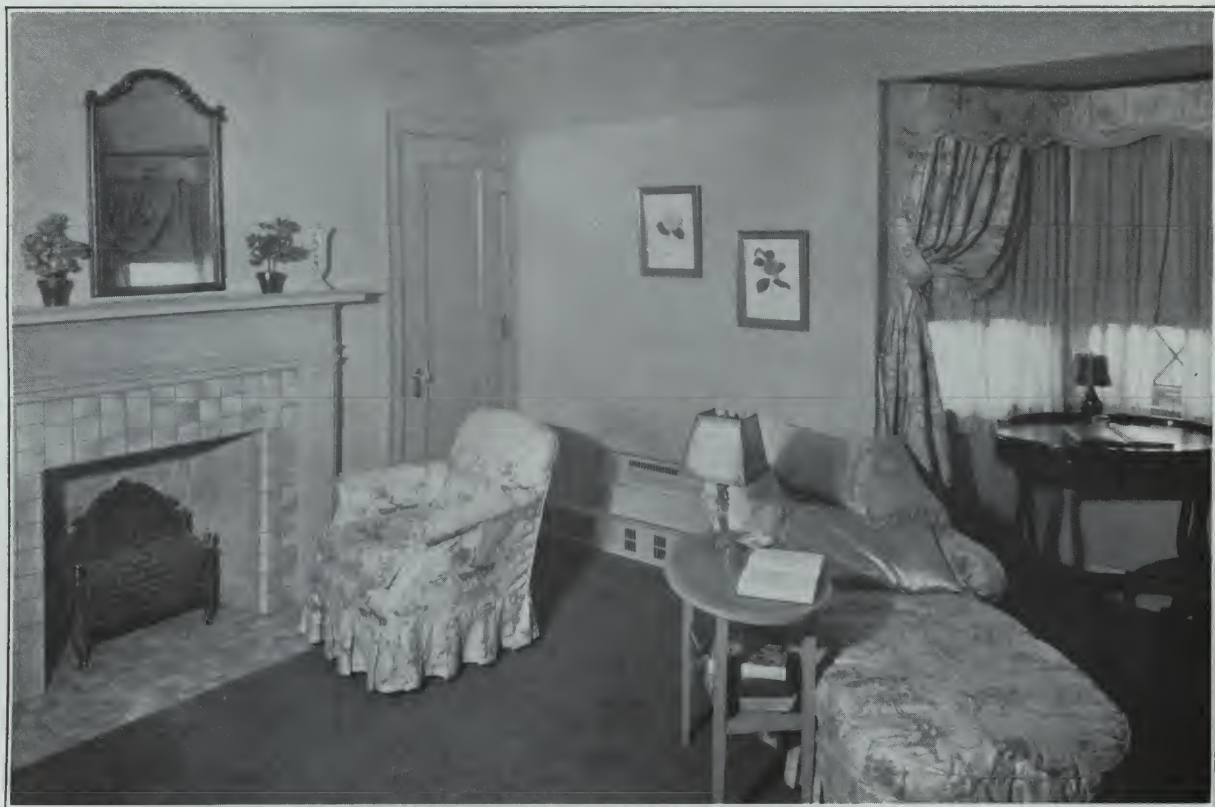
The reading table next to the window in the library is comfortably warm on the coldest day with AERIET heating.



No floor space required in this hallway for unsightly radiator. Air-Way AERIET installed under stairs.



Where Dependable Heat Is Desired Specify *Air-Way* AERIET



A constant stream of warmed air is gently forced into the room by Air-Way AERIET



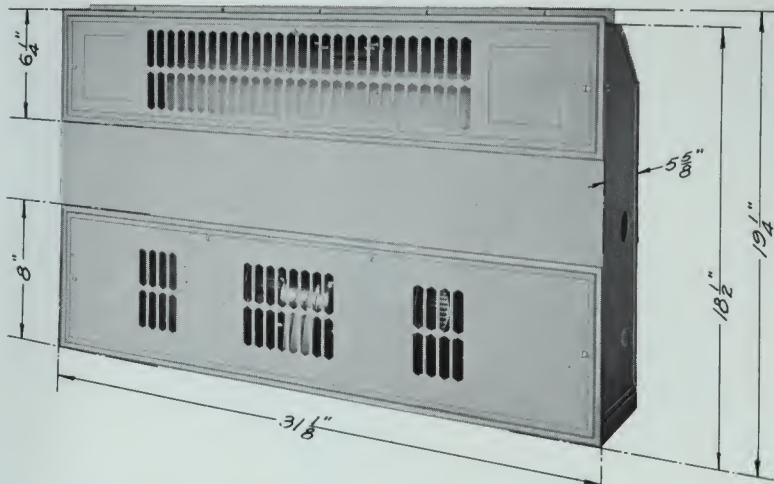
*The bath-room heated by Air-Way AERIET
is always warm*



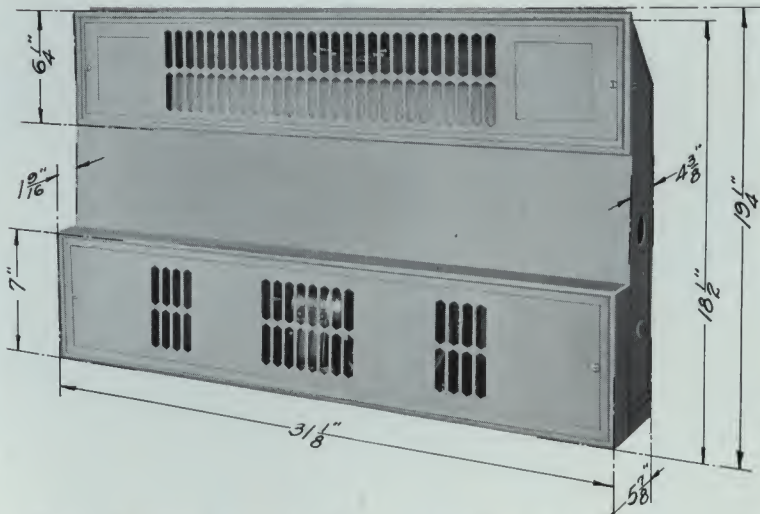
*AERIET brings comfort to this naturally
draughty corner*



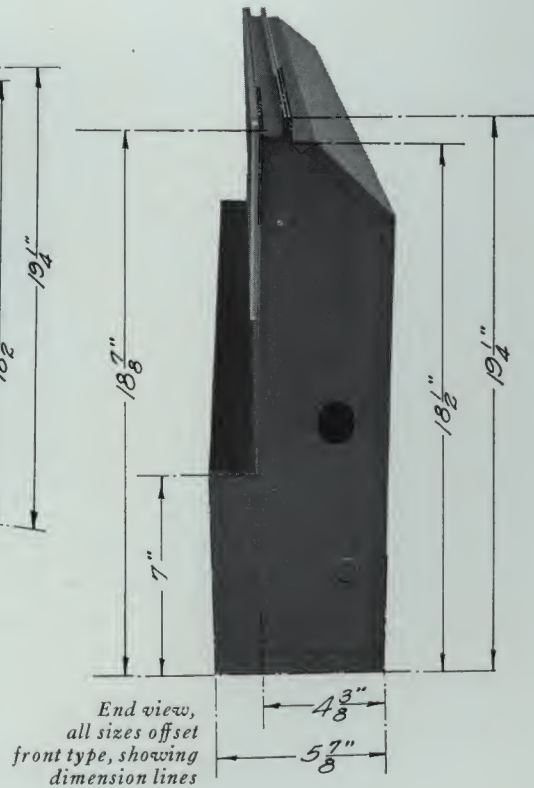
Model 14 *Air-Way* AERIET

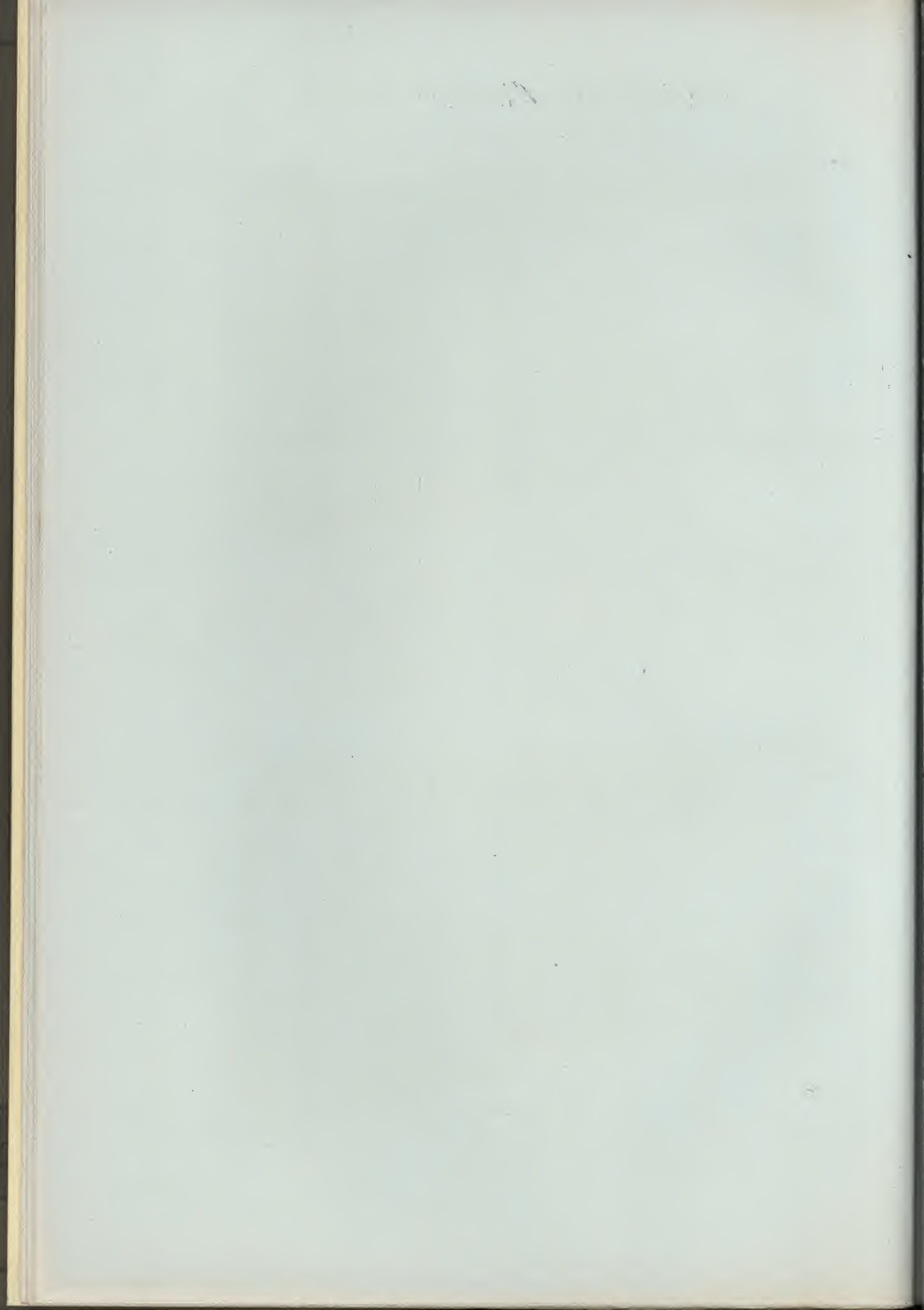


Model 14—Flush Front Type. For installation in wall recess $5\frac{3}{8}$ " deep from finished plastered wall. Entire front panel removable on all types and sizes.

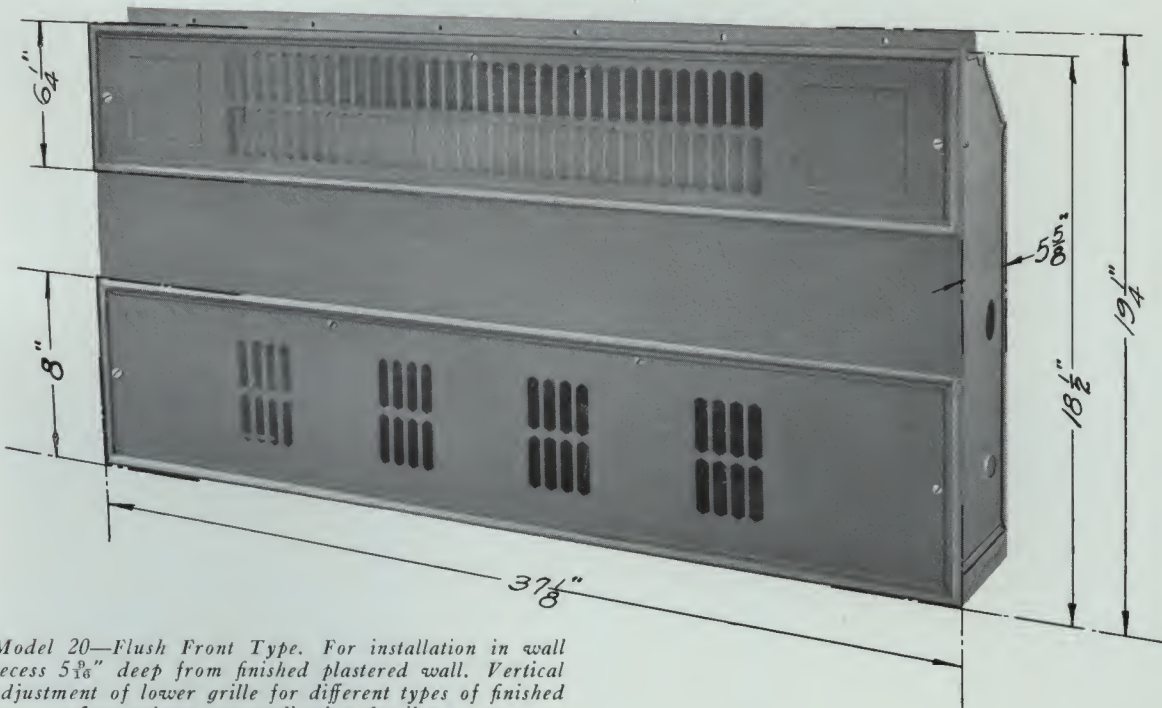


Model 14—Offset Front Type. For installation in wall recess $4\frac{3}{8}$ " deep from finished plastered wall. Access door for shut-off valve provided in upper right hand corner on all types and sizes.

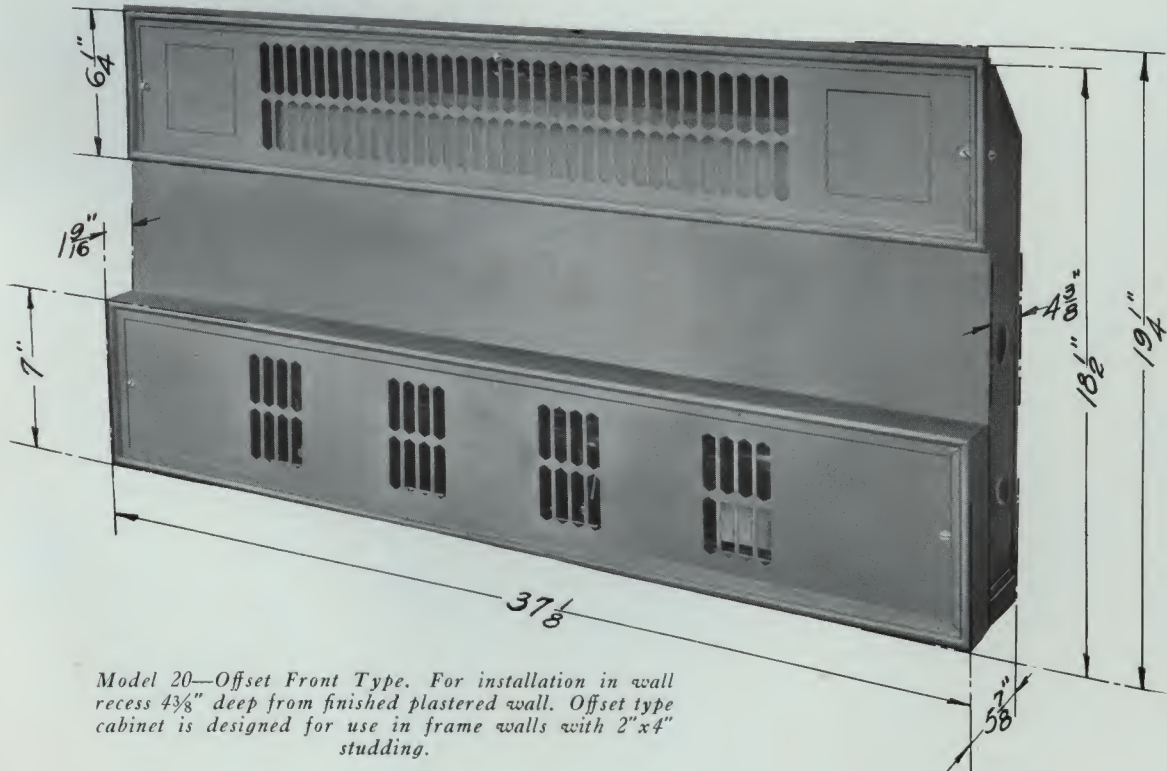




Model 20 *Air-Way* AERIET



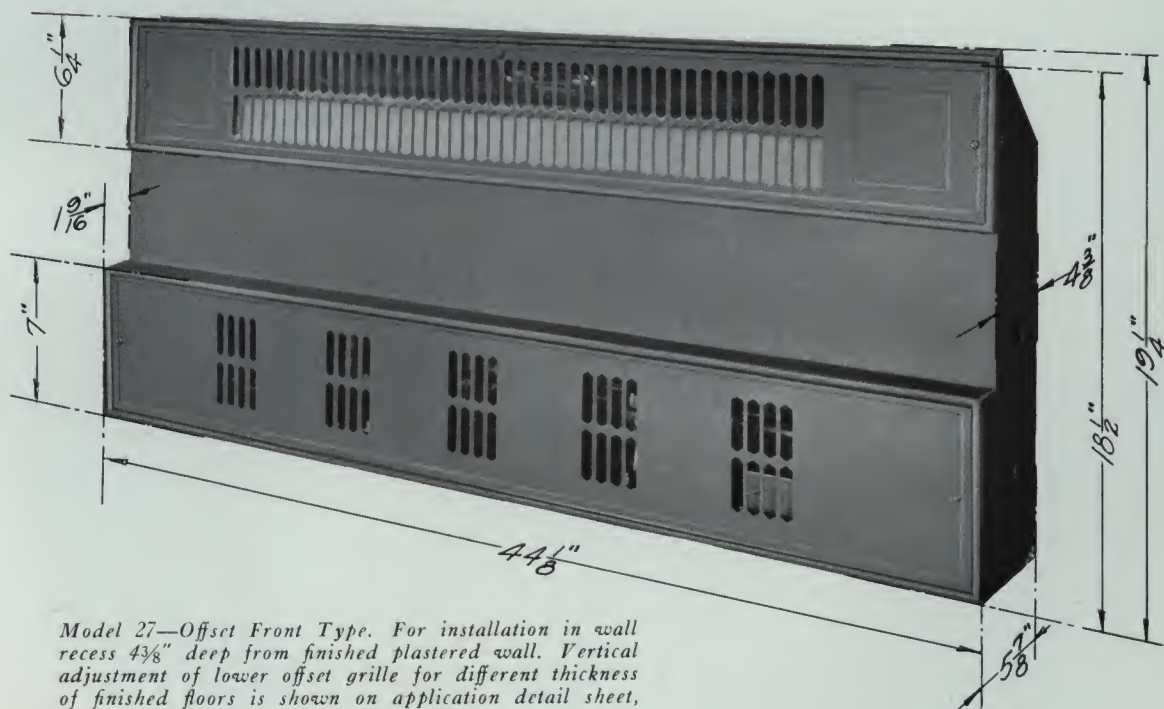
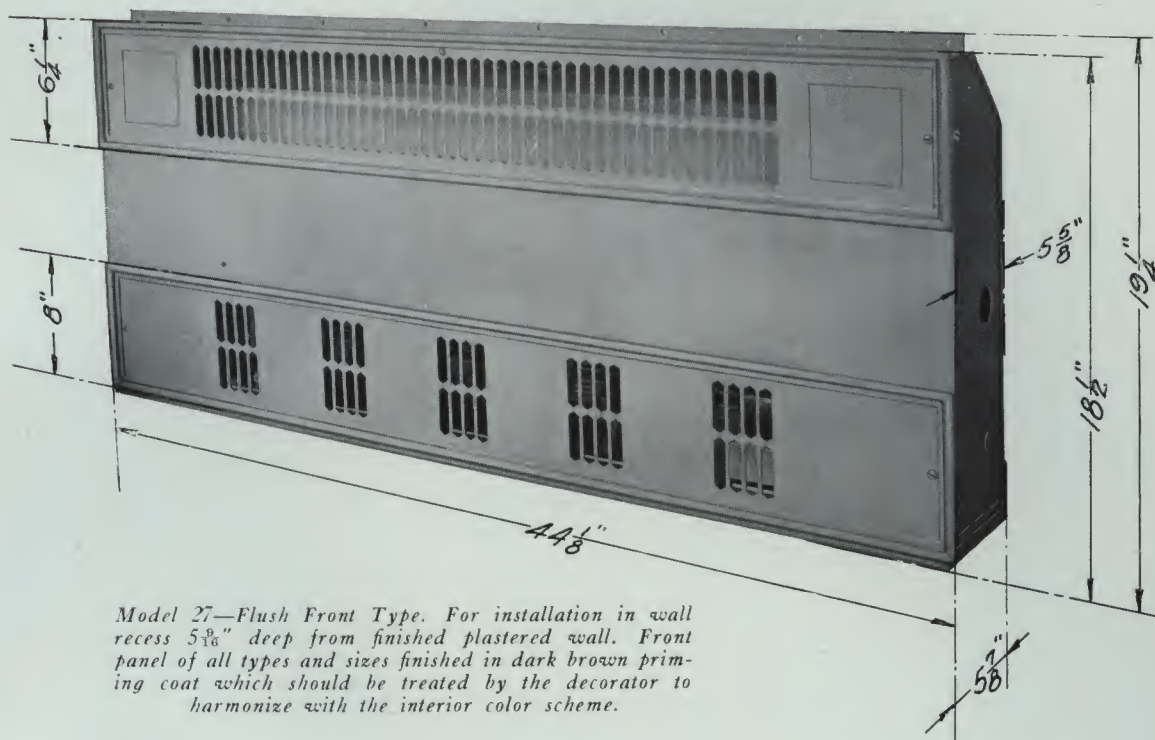
Model 20—Flush Front Type. For installation in wall recess $5\frac{5}{8}"$ deep from finished plastered wall. Vertical adjustment of lower grille for different types of finished floors shown on application detail page.



Model 20—Offset Front Type. For installation in wall recess $4\frac{3}{8}"$ deep from finished plastered wall. Offset type cabinet is designed for use in frame walls with $2" \times 4"$ studding.



Model 27 *Air-Way* AERIET





Air-Way AERIET for Steam, Vapor or Hot Water

ENGINEERING DATA

Cabinet

As illustrated on pages 9 to 11 inclusive, Section 200, the Air-Way AERIET is built in two styles of cabinets, and each style is available in three sizes. Cabinets are designed to be installed within the walls and are provided with a removable panel front which is to be fastened on the cabinet frame after the walls are plastered, but before the walls are decorated. Front panels are finished in brown priming coat only, at the factory, and are to be decorated after installation to match adjacent walls.

Installation and Setting of Cabinets

The proper size of recess as shown by drawing No. 142027-S3 (page 23) must be provided in building construction. The minimum depth of recess is measured from the finished wall line. For the offset type cabinet which is designed for installation in frame or furred walls where 2"x4" studding is used, this depth is 4 5/16". For the flush type cabinet this depth is 5 9/16".

The rough floor or the sleepers of concrete floor construction should be run into the recess for the base of the cabinet and a substantial, firm wood buck or header provided across the top of the recess for nailing the cabinet in place.

Before locating header or nailing strip across top of recess and before setting the cabinet in place, be sure to check height from top of rough floor or sleepers to top of finished floor. If this distance is more than 1/2" for flush type cabinet or 3/4" for offset type cabinet, it will be necessary to provide a shim of proper thickness so that the bottom of the cabinet will be less than 1/2" or 3/4" below finished floor line.

When fastening the cabinet in place, care must be taken to set the cabinet level. Metal ears with holes are provided on the sides of the cabinet and on top of the flush type cabinet for fastening metal lath. The sides of the cabinet form the plaster ground, but *metal lath and plaster should not be applied until steam or hot water piping and wiring connections are installed and tested.*

Piping Connections

After the cabinet is fastened in the recess, piping connections should be installed to the heating element, including installation of auxiliary equipment such as valves, traps, or air vents in accordance with the requirements of the type of system used.

Details of piping connections drawing No. 142027-S8 (page 26) and the following notes are suggestions only—it is recognized that the engineer designing the piping system or the contractor making the installation thoroughly understands the principles of circulation for the type of system selected.

The Air-Way AERIET is designed to fit into any type of steam or hot water system. Ample space is provided in the ends of the cabinet and knock-outs are provided in bottom and ends so that piping connections can be made in the manner best suited to the particular type of building construction. Piping connections must be made at op-



posite ends of the Unit. Roughing dimensions (pages 29 to 34) give location of fittings and knock-outs in the cabinets. Piping connections from the risers to the AERIET may be concealed in various ways, either in floor construction or in chases in the wall.

Where AERIETS are to be used on any type of steam system, the Units are provided with a union on the supply end of heating element, with $\frac{3}{4}$ " female thread (right end of cabinet facing Unit) and a special cooling leg and scale pocket fitting with union connection to heating element is furnished on the return end (left end of cabinet facing Unit.) The outlet of the cooling leg is provided with $\frac{1}{2}$ " female thread. The purpose of this fitting is to obtain a cooling reservoir to insure proper drainage of the heating element when thermostatic type of traps are used.

Where a closed return type of system is used (local vents required at each Unit) the $\frac{1}{4}$ " plugged tapping in top of cooling leg is provided for installation of the air vent valve—shut off valves, air vent valves or traps are not furnished with AERIET Units,—however, the closed return system is usually a one pipe gravity system, and in order to obtain proper drainage, it is essential that two pipe connections be used for the AERIET Units. To obtain the best steam circulation and prevent air binding due to short circulating, the return from the Units on a closed return system should be dripped into a wet return line.

Where a vented return type of system is used (vapor-vacuum or vacuum-vapor systems) piping connections to the AERIET are the same as for any other exposed or concealed heating radiator of equal capacity. Due to the method of controlling heat delivery of the AERIET Unit by controlling the motor operation, steam control valves are not required. However, shut-off valves are desirable in supply connections. These valves can be inexpensive gate valves rather than the expensive modulation type radiator supply valves. If shut-off valves are installed in the supply branch inside of the cabinet, these gate valves should be the non-rising stem type and the distance from the center of the valve body to the top of the valve wheel should not exceed $4\frac{7}{8}$ " so as not to interfere with opening the access door in the upper right hand corner of the cabinet.

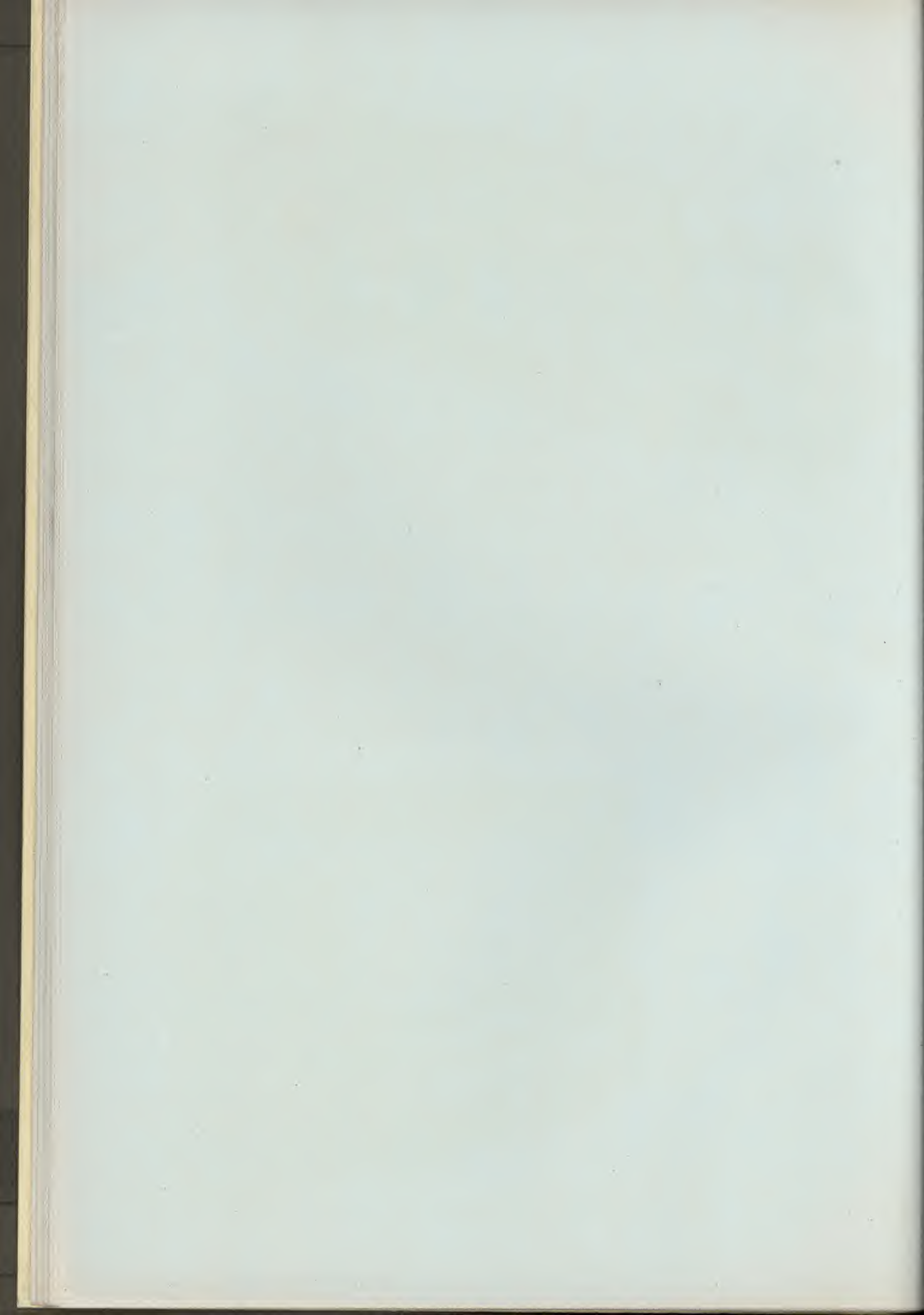
Knock-outs in the left end of the cabinet are provided so either angle or straight-away pattern traps on return can be used. The lower grille and entire front panel of the Unit is removable, thus providing easy access to auxiliary equipment on supply and return connections.

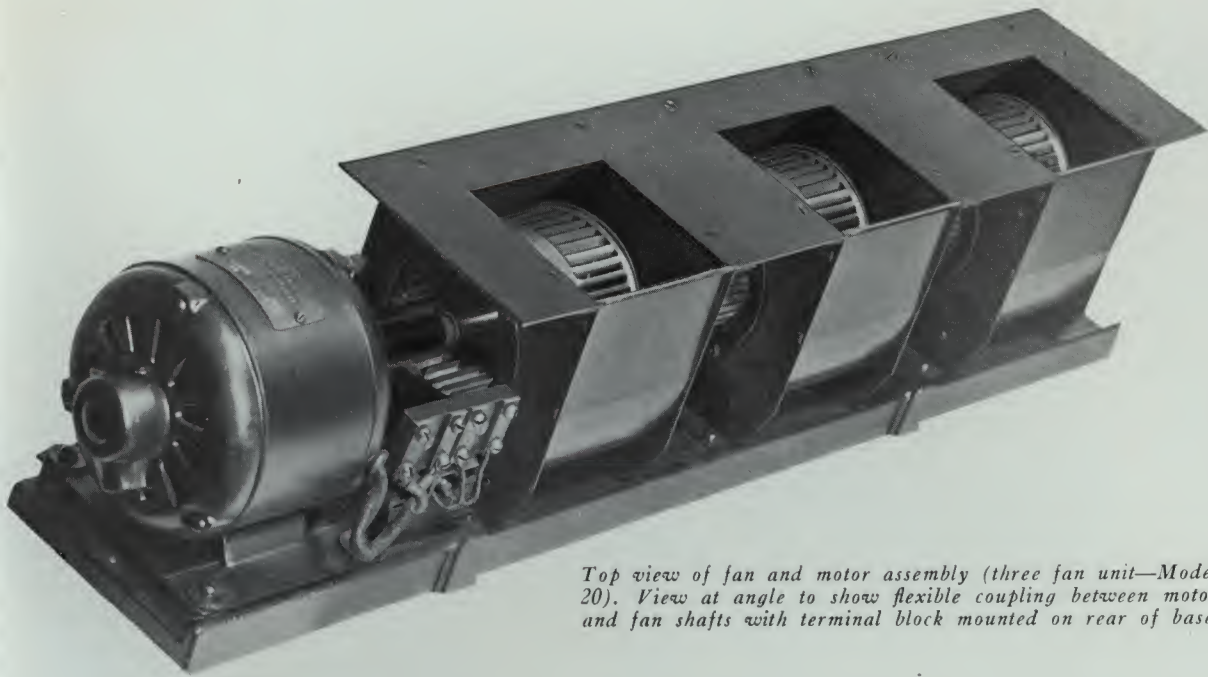
The heating element of the Air-Way AERIET is leak-proof, indestructible, and guaranteed for pressures up to 150 pounds. In some cases, buildings are supplied with high pressure steam. By operating the entire heating system at initial pressure, which is possible if AERIET Units are used throughout, reducing valves are eliminated, the size of all steam piping, is reduced, and there is a reduction in number of heaters required, thus greatly reducing the initial cost of the installation.

When AERIET Units are to be installed on any type of hot water system, they are furnished with $\frac{3}{4}$ " union elbow in place of the cooling leg on return end, and a special vent connection with $\frac{1}{8}$ " hand operated air vent valve is provided in the top of the heating element. This valve can be reached through the access door for venting the top of the heating element. *It is very important that AERIET Units to be used on hot water systems be ordered specifically, otherwise standard steam Units will be provided.*

Fan and Motor Assembly

Each Air-Way AERIET is equipped with a motor directly connected to two or more multi-blade type fans in housings set directly below the heating element. Fan and motor assembly Units are furnished in two types (type M and type T). Before ordering; the design of control installation should be checked carefully so that the proper type of Unit is secured. Type M fan and motor Units can be used only where the operation of each AERIET Unit is to be manually controlled by the room occupants and motor operation will be regulated by the speed control switch mounted adjacent





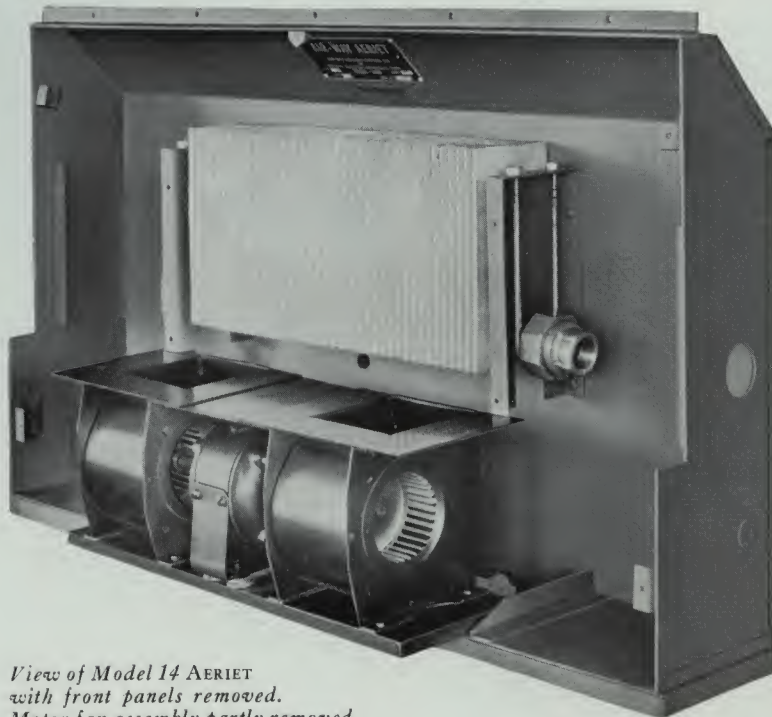
Top view of fan and motor assembly (three fan unit—Model 20). View at angle to show flexible coupling between motor and fan shafts with terminal block mounted on rear of base.

to each Unit and not from a master switch or automatic temperature control equipment. Type T units must be used where the operation of the AERIET motor is controlled by electric thermostat in the room, or where several AERIETS are controlled by one master switch or central thermostat.

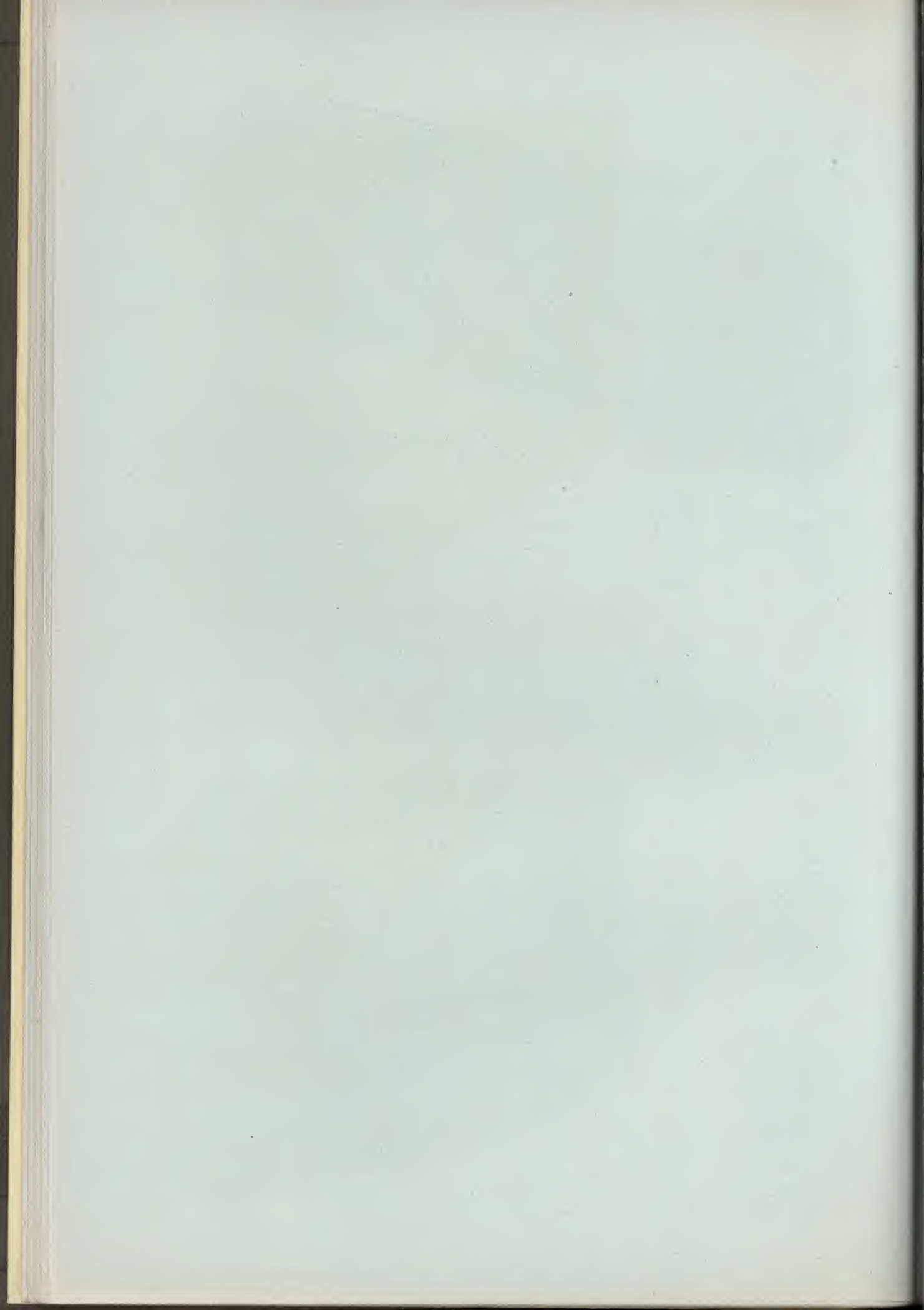
The entire fan and motor assembly, either type M or type T, including speed control apparatus and the motor terminal block, is built as a single Unit and mounted on a base which is easily removable from the AERIET cabinet by removing the lower or inlet grille of the front panel and detaching wiring connections from the terminal block.

All wiring leads inside the cabinet beyond the terminal block are furnished with the AERIET. Where model 20-T, or 27-T Units with motors for automatic control are used with 110 or 220 volt 60 cycle service, the manufacturer furnishes a capacitor with the fan and motor assembly, which the electrical contractor mounts in the cabinet in the space provided on the left end of the front panel. It is recommended in new building construction that the capacitor should not be mounted in the cabinet until the fan and motor assembly is installed. The capacitor is furnished with wiring leads for connection to the terminal block and motor.

All other sizes and types of Units are furnished completely wired to the terminal block with all accessories mounted on the motor



View of Model 14 AERIET with front panels removed. Motor fan assembly partly removed.

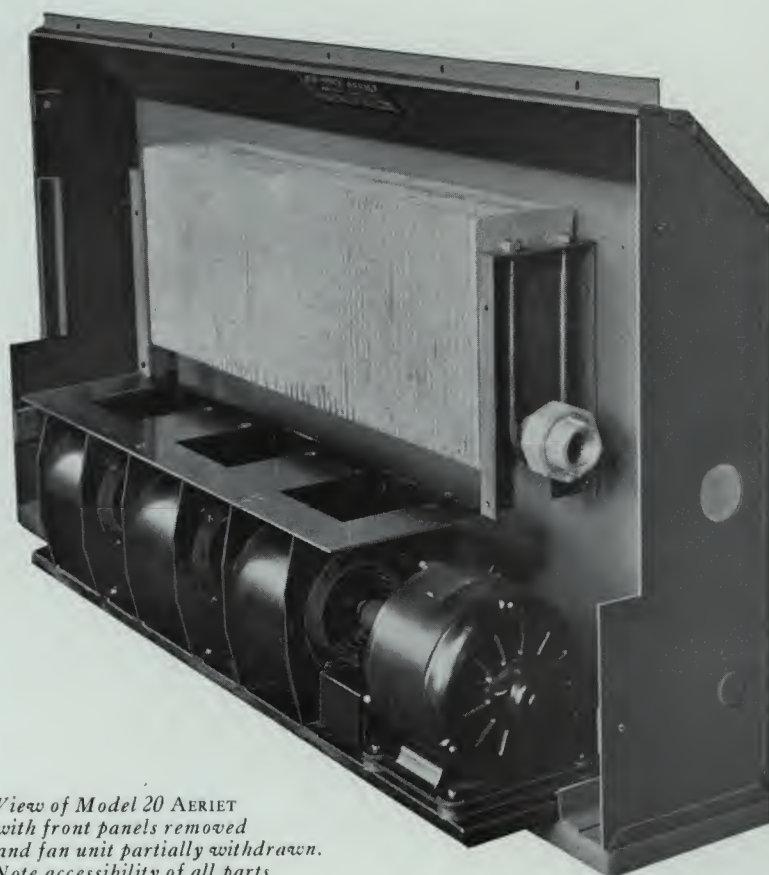


block, and the contractor need only make connections to the terminal on the motor assembly.

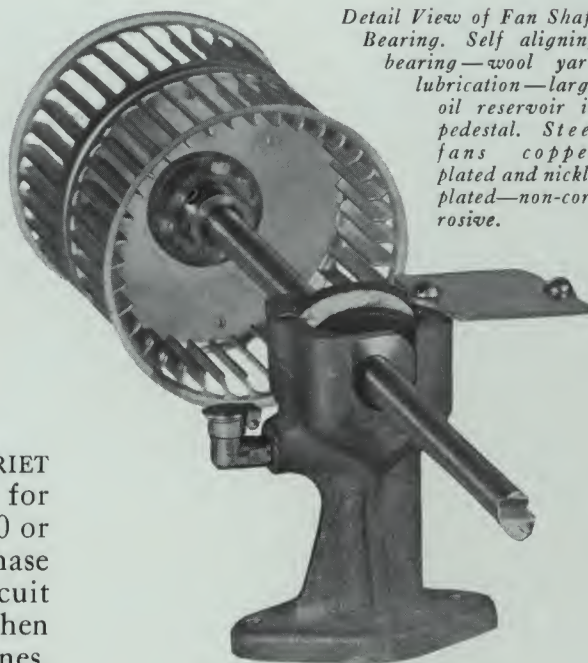
Steam or hot water type AERIETS are provided with three-speed motors insuring absolute noiseless operation at low or normal speed. The model 14 Units have two fans, the fan wheels being mounted on extended shafts of the motor, thus requiring no separate shaft bearings. The model 20 and 27 AERIETS have three and four fans respectively. On these models the motor is set in the right end of the cabinet under the supply connection to the heating element. A flexible coupling built of oil and heat resisting rubber is provided between motor and fan shafts, thus insuring alignment of shafts and preventing strain on the motor bearings.

Oversize bearings are provided for motor and fan shafts, and a wool yarn type of lubrication is used on all bearings. Oil reservoirs hold sufficient oil for an entire season's operation. Filling all oil reservoirs at the beginning of each heating season is the only attention required by the mechanical equipment. The fan shaft bearings are self-aligning and all moving parts are designed so as to secure noiseless mechanical operation. See "Wiring" for description of the switches furnished with AERIET Units.

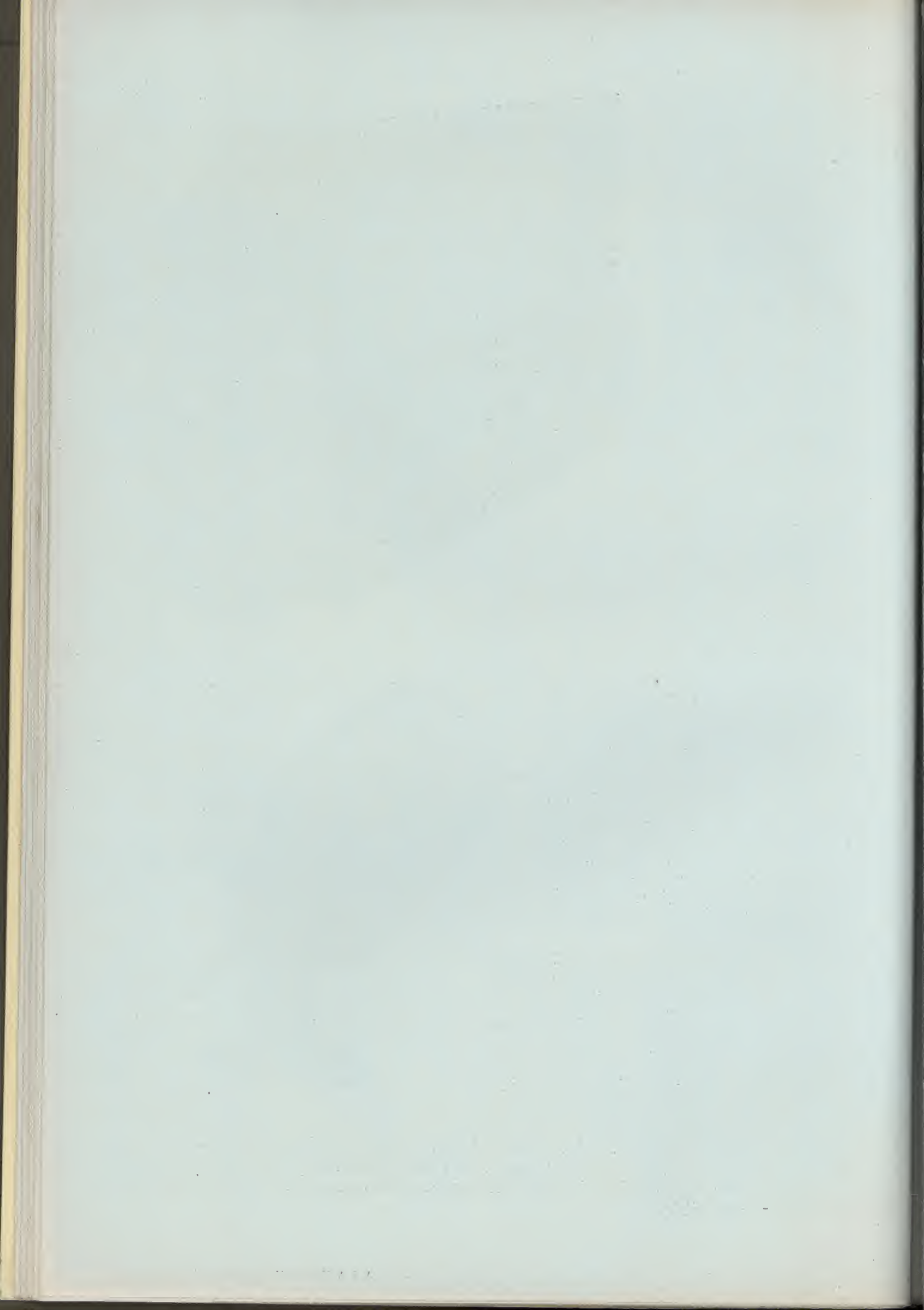
Air-Way steam or hot water type AERIET Units of type M or type T can be furnished for alternating current either 110 or 220 volts, 60 or 25 cycle, single phase service. Single phase Units may be operated on a three phase circuit by using any pair of wires for connections. When several Units are connected to three phase lines, the connections should be divided between the three phases in order to keep the load on each pair of wires properly balanced. Direct current motors either 115 or 230 volt service can be furnished, but because of radio interference arising from brushes necessary in direct current motor construction, it is recommended that alternating current motors be used wherever possible.



View of Model 20 AERIET with front panels removed and fan unit partially withdrawn. Note accessibility of all parts.



Detail View of Fan Shaft Bearing. Self aligning bearing—wool yarn lubrication—large oil reservoir in pedestal. Steel fans copper plated and nickle plated—non-corrosive.



Wiring

AERIET speed control switches are furnished with the Units for installation on the wall, usually adjacent to the cabinet. For model 20M or model 27M units with manual control type motors for 110 or 220 volt 60 cycle service, a four point rotary type switch is furnished with brushed brass cover plate. A standard single switch box is to be furnished by the electrical contractor for mounting the switch.

For all other Units three tumbler type switches are furnished with the Unit. The electrical contractor is to furnish the standard three gang cover plate of the finish which may be specified and also the three gang switch box. Where tumbler type switches are used with AERIETS, they are shipped with bars holding the switches in proper position. All terminals on switches are plainly marked to correspond with markings on the terminal block. The bars holding the switches in proper position for shipment must be removed for installation in the outlet box.

AERIET Units may be connected to the lighting system providing the motors are wound for the proper voltage, cycle and phase, or a separate wiring circuit may be installed for all AERIET Heating Units. The design of the wiring system leading up to the speed control switch for each Unit should be laid out by the architect or engineer. This work must be done in accordance with local or state rules and regulations and must meet the varying conditions of building construction. The wiring should be designed so that the voltage drop will not exceed one volt between the service panel and last AERIET when all Units are operating at high speed.

Wiring connections to all types of AERIET Units must enter the cabinet through the right end (facing cabinet) and proper knockouts are provided for the conduit. It is recommended that, wherever possible, the speed control switch be mounted on the wall near the right end of the cabinet, but this recommendation is only to reduce the length of the multiple connector cable between the speed control switch and the cabinet.

The current requirements for determining the size of wiring for AERIET motor circuits are given in the following table:

TYPE "M" (for Manual Control) Air-Way Steam or Hot Water AERIETS

Current in Amperes—High Speed Operation					
	A. C. 60 cycle, single phase		A. C. 25 cycle, single phase		Direct Current
	110 volt	220 volt	110 volt	220 volt	115 volt
Model 14	.58	.29	.30	.15	.20
Model 20	1.00	.50	.75	.37	.50
Model 27	1.00	.50	.75	.37	.50

TYPE "T" (For Automatic Control) Air-Way Steam or Hot Water AERIETS

Current in Amperes—High Speed Operation					
	A. C. 60 cycle, single phase		A. C. 25 cycle, single phase		Direct Current
	110 volt	220 volt	110 volt	220 volt	115 volt
Model 14	.58	.29	.30	.15	.20
Model 20	.40	.20	.75	.37	.50
Model 27	.40	.20	.75	.37	.50

Note: When single phase Units are used on three phase circuits: figure above ampere current per unit for one phase—balance phases by alternating connections to different phases.



The exact wattage consumption varies for the different types, sizes and speed of operation. The following table gives input for calculating wattage consumption.

TYPE "M" (For Manual Control) Air-Way Steam or Hot Water AERIETS

Watts Input—110 or 220 Volts. 60 Cycle A. C.			
	High Speed	Intermediate Speed	Low Speed
Model 14	45	17	12
Model 20	60	35	30
Model 27	60	35	30

TYPE "T" (For Automatic Control) Air-Way Steam or Hot Water AERIETS

Watts Input—110 or 220 Volts. 60 Cycle A. C.			
	High Speed	Intermediate Speed	Low Speed
Model 14	45	17	12
Model 20	38	13	8
Model 27	38	13	8

TYPE "M" (For Manual Control) Air-Way Steam or Hot Water AERIETS

Watts Input—110 or 220 Volts. 25 Cycle A. C. 115 Volts—Direct Current			
	High Speed	Intermediate Speed	Low Speed
Model 14	23	14	9
Model 20	57	37	23
Model 27	57	37	23

TYPE "T" (For Automatic Control) Air-Way Steam or Hot Water AERIETS

Watts Input—110 or 220 Volts. 25 Cycle A. C. 115 Volts—Direct Current			
	High Speed	Intermediate Speed	Low Speed
Model 14	23	14	9
Model 20	57	37	23
Model 27	57	37	23

Wiring connections between selective speed switches and terminal block in the cabinet must be run in conduit and connections made in accordance with wiring diagrams Dwg. Nos 142027 S4 and 2027 STM6, on pages 27 and 28. (Wiring diagrams are also attached to each fan and motor assembly.) All wiring into the Unit including line wires to thermostat (if specified) and to and from the speed control switch, must be completed before the conduit is covered by lath and plaster. Since the fan and motor assembly should not be installed until plastering and decorating is completed, the ends of all wires in the cabinet should be tagged with the same symbol as used on the switches.



Heating Capacities

The Air-Way AERIET is a new departure in heating equipment, designed to take full advantage of proper heat distribution or heat utilization. For this reason the AERIET sets a new standard as a measurement of heating capacity. No longer is it possible to measure heating capacity by the old standard, which was the amount of steam condensed. This old measurement can only be used for designing the size of supply and return mains, branches and risers, size of traps or condensation return apparatus, and the size of the boiler.

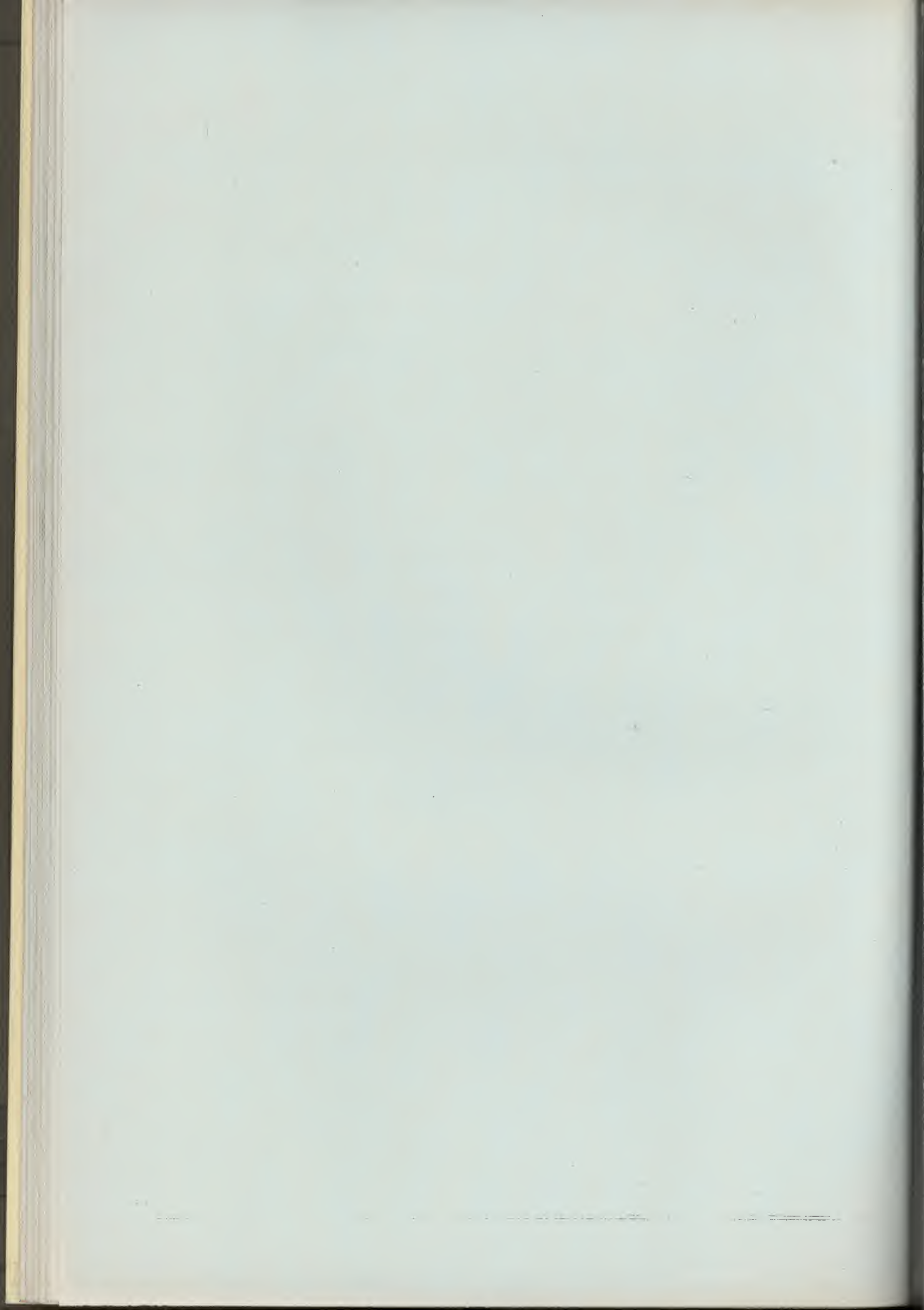
Actual heating capacity of the Units must be based on a new standard of heat utilization or living zone comfort. This is a measurement of heat distribution or degree of comfort obtained within the living or working zone of the room to be heated. Both room heating capacities and boiler capacities are given in B.T.U. per hour and also the old method of rating in square feet of equivalent steam direct radiation. Equivalent direct radiation rating is based on 240 B.T.U. per hour heat transmission per square foot steam radiation. Steam ratings are based on steam pressure at the Unit as given in the capacity tables, the Unit being set in the room with a temperature of 70° taken 3 feet above floor line, this being in accordance with the standard method of rating heating units.

For B.T.U. capacity at other steam pressures and room temperatures, multiply by the correction factor given in the table. For pounds of steam per hour, divide B.T.U. capacity at the steam pressure and room temperature desired by the latent heat of saturated steam at the final steam pressure.

For effective capacity rating at other steam pressures, multiply B.T.U. capacity given by following factors:

Correction factor for determining capacity of Steam AERIETS for various steam pressures and room temperatures.

Steam temperatures Degree F.	Steam Pressure Lb. Gauge	Room Temperature—3'-0" above floor level.						
		50°	55°	60°	65°	70°	75°	80°
212	0	1.115	1.08	1.045	1.015	.98	.945	.91
215	1	1.135	1.10	1.07	1.035	1.00	.965	.93
218	2	1.155	1.125	1.09	1.055	1.02	.985	.95
227	5	1.22	1.19	1.15	1.115	1.08	1.045	1.015
239	10	1.30	1.275	1.235	1.20	1.165	1.13	1.095
250	15	1.38	1.345	1.31	1.275	1.24	1.205	1.17
258	20	1.435	1.40	1.365	1.33	1.295	1.26	1.225
267	25	1.495	1.46	1.425	1.395	1.36	1.32	1.295
274	30	1.545	1.51	1.475	1.44	1.405	1.37	1.335
286	40	1.625	1.59	1.555	1.525	1.49	1.455	1.42
297	50	1.70	1.67	1.635	1.60	1.565	1.53	1.495
307	60	1.77	1.735	1.705	1.67	1.635	1.60	1.565
324	80	1.885	1.855	1.82	1.785	1.75	1.72	1.68
338	100	1.985	1.95	1.915	1.88	1.845	1.815	1.78
353	125	2.09	2.05	2.02	1.985	1.95	1.915	1.88
366	150	2.18	2.14	2.11	2.07	2.04	2.00	1.97

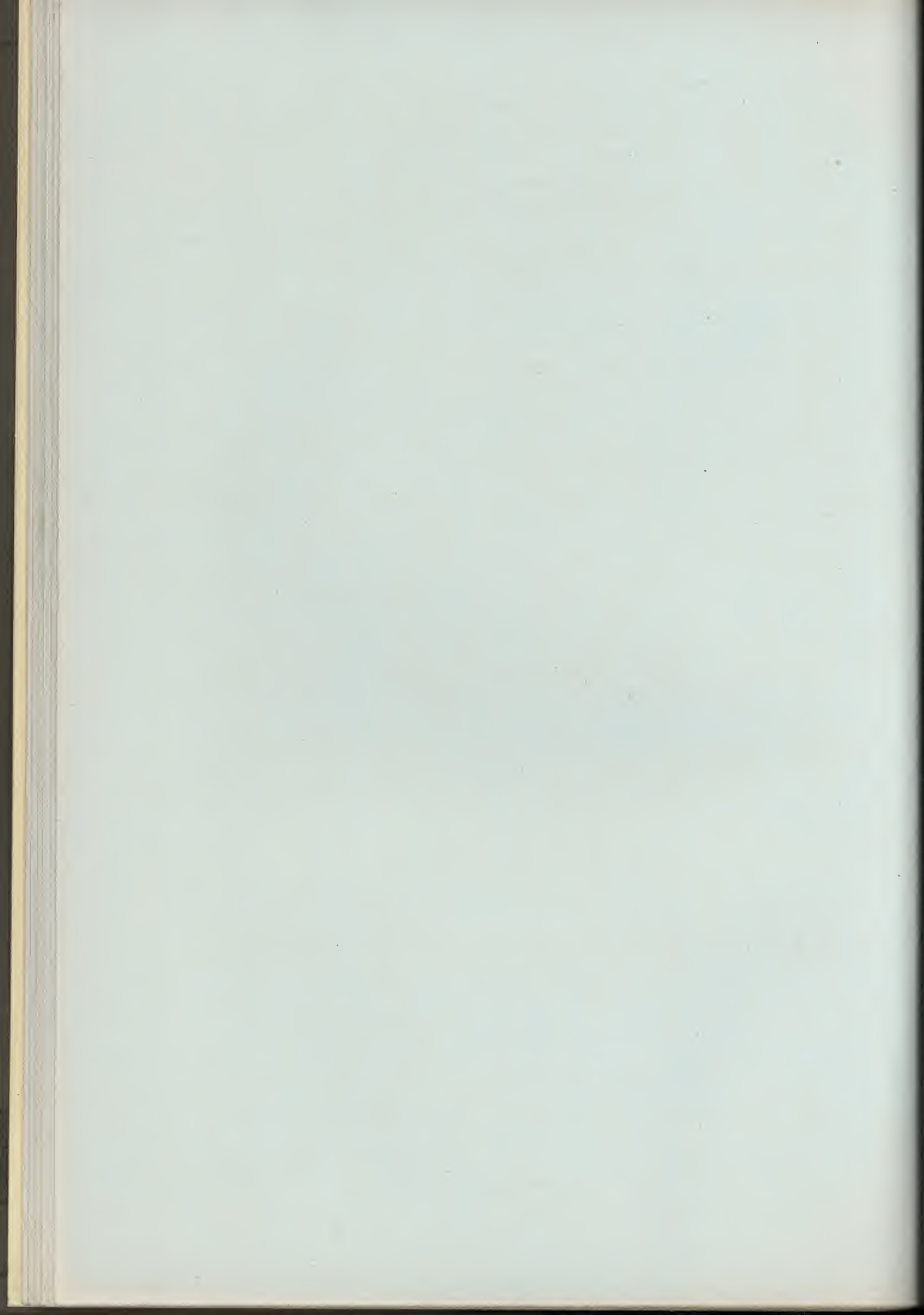


The size of supply and return mains, branches and risers, radiator traps, condensation return apparatus and boiler capacity can be based on the condensation of the heating element. However, it is always advisable to base the design of the heating system on maximum capacity of the AERIET Units when operating at high speed.

Hot water ratings of heating units of all types have heretofore been based on a conversion factor which may be anywhere from 150 to 200 B.T.U. delivery per square foot of equivalent direct radiation per hour. A true rating for hot water heating units must be based on average water temperature in the heating element (not boiler water temperature) and this average temperature will depend on the velocity of water circulation.

Instead of following the generally accepted practice of giving a definite hot water rating for AERIET Units which in practice will apply to few installations, the Air-Way Electric Appliance Corporation feels justified in establishing a new precedent, and definite hot water ratings will not be given. Heat delivery from AERIET Units used on hot water heating systems will be rated with proper consideration given to room temperature, type of system, open or closed type gravity or forced circulation, and height of unit above boiler or velocity of water for forced circulation systems.

The engineering department will give equivalent capacity ratings if full details of type of hot water system is furnished, as conditions effecting hot water ratings vary over such a wide range it is impossible to publish this data in complete form.



Rated Capacities

Capacities given apply to offset or flush type cabinets and type "M" or type "T" fan units.

Steam AERIET Units

Effective Heating Capacity

Model 14-S AERIET

	High Speed	Intermediate speed	Low Speed
Effective capacity B.T.U. per hour	9600	8260	6160
Equivalent direct steam radiation	40	30.25	25.67

Model 20-S AERIET

Effective capacity B.T.U. per hour	14400	10920	9120
Equivalent direct steam radiation	60	45.5	38.5

Model 27-S AERIET

Effective capacity B.T.U. per hour	19200	14520	12300
Equivalent direct steam radiation	80	60.5	51.25

The above tables are based on heating elements properly vented, filled with steam at 1# pressure (215° steam temperature) and kept free from condensation, and with room temperature 70° at a point 3'0" above floor.

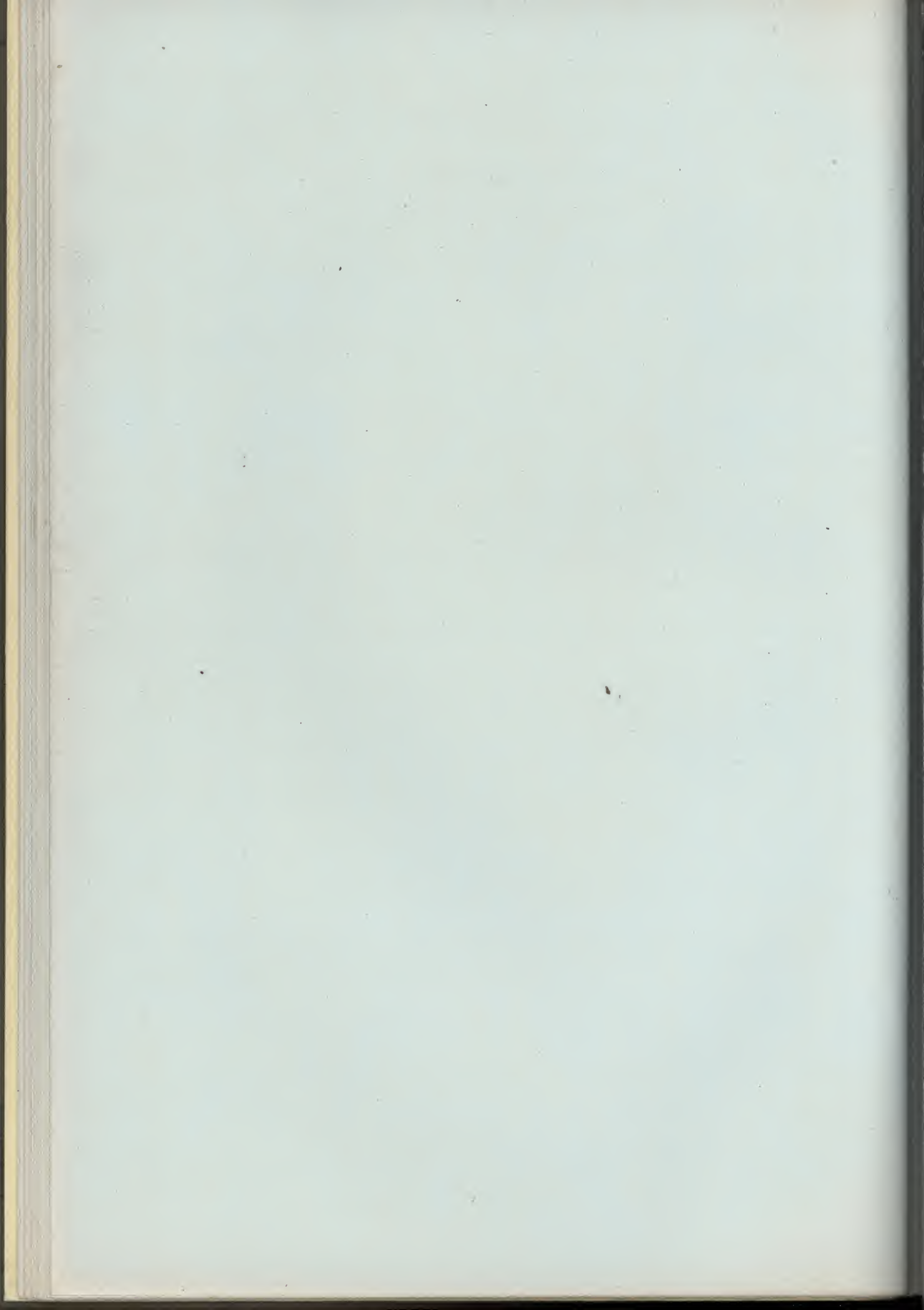
For B.T.U. capacities at other steam pressures and room temperatures, multiply effective heating capacity given in the above table by correction factor given in the table above on page 18 for pressure and room temperature desired.

Steam AERIET Capacity Rating for Boilers, Mains and Return Apparatus

	Model 14	Model 20	Model 27
B.T.U. per hour	8000	12000	16000
Pounds of steam per hour	8.25	12.37	16.5

Above capacities are for 1# steam pressure (215°) and room temperature 70°—3'0" above floor.

For B.T.U. capacity for selecting size of boilers, mains and return apparatus for other steam pressures and room temperatures, multiply B.T.U. or pounds of steam per hour of above table by correction factor given in table on page 18.



Outline of Specifications for *Air-Way* Steam, Hot Water or Vapor Type AERIETS

Heating

Heating contractor shall furnish and install in strict accordance with these specifications, accompanying plans and details, and manufacturer's instructions, all Air-Way AERIET Units of the size and type shown on plans or as listed in the schedule.

All heating Units indicated as "AERIET" Units, shall be the Air-Way AERIET as manufactured by Air-Way Electric Appliance Corporation of Toledo, Ohio. AERIET Units shall be furnished with cabinets of Paneled (Flush) and/ or (Offset) type with (type M, for manual control) or (type T for thermostatic or automatic control) fan and motor assemblies. Unless otherwise indicated on plans and details these shall be standard Units as listed in the manufacturer's catalogue.

Heating Units shall be complete Units including: fan and motor assembly with motors wound for -- volt -- cycle -- single phase alternating (or -- volt direct) current; heating element of the leakproof, indestructible cast aluminum type with fins cast integrally with steam or water section, guaranteed for a working pressure of 150 lbs.; inlet and outlet connections provided with union fittings and (for steam systems) return connection furnished with cooling pocket, (for hot water system) vent connection with hand operated vent valve furnished in top of heating element; cabinets to be furnished complete by manufacturer with removable front panels with inlet grille at bottom of front panel having $\frac{1}{2}$ " or $\frac{3}{4}$ " vertical adjustment; cabinets finished in priming coat only. Selective speed switches for controlling motor speeds, shall be furnished with the Units, but will be installed separately.

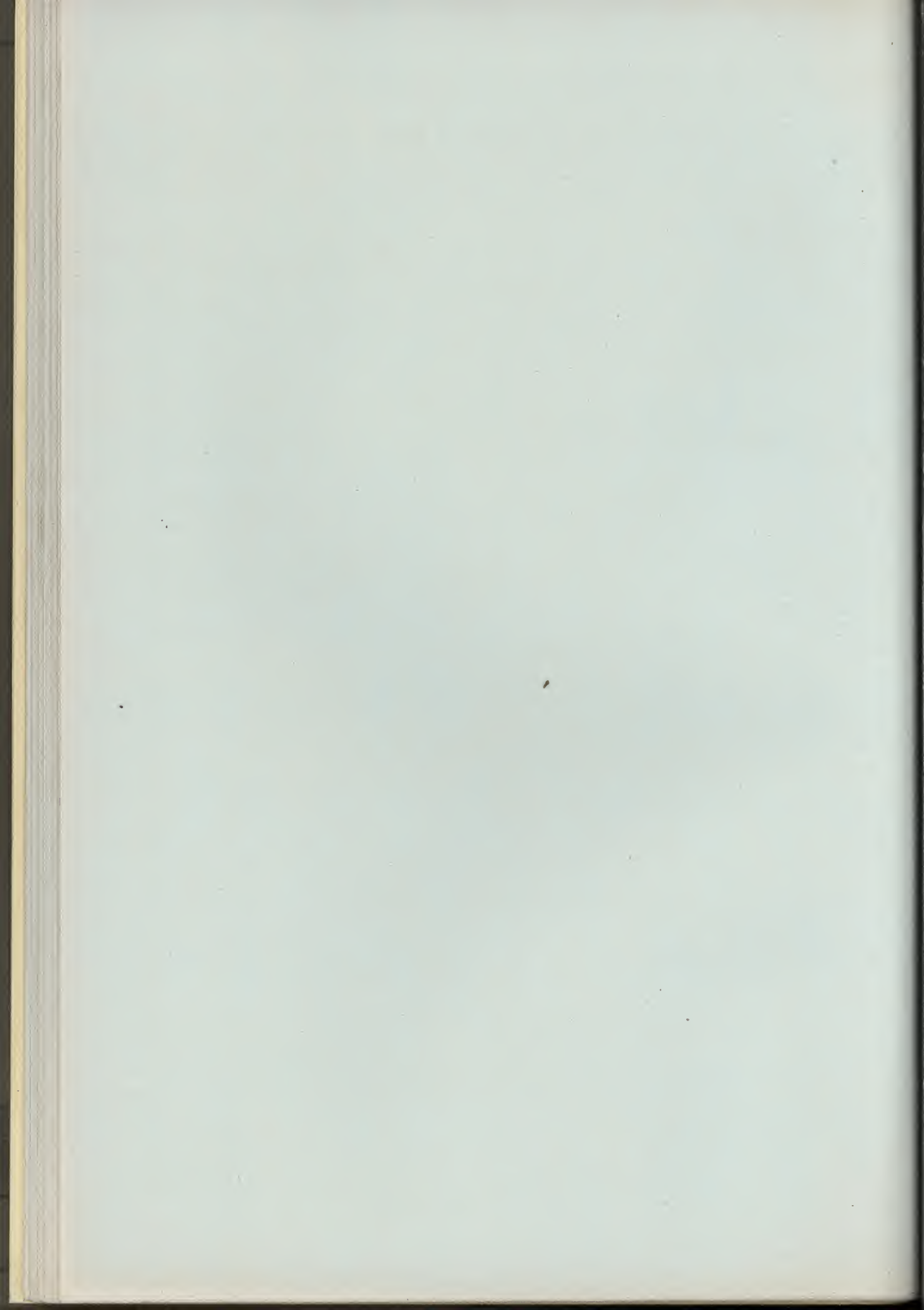
The general contractor will provide recesses in building construction with nailing strip or lintel for fastening AERIET in place. For this purpose heating contractor must furnish general contractor with correct details as to size and location of recesses so suitable clearances will be provided at the proper time during construction.

AERIET Units shall be set level by heating contractor with bottom of Unit not more than $\frac{1}{2}$ " or $\frac{3}{4}$ " below finished floor level. All piping connections shall be made in a neat and workmanlike manner, and all piping tested before plastering is started. Before setting cabinets in recesses, contractor shall remove front panel from each and store until plastering is finished. Panels must be replaced before painting or decorating is started. Contractor shall turn the fan and motor assembly and speed control switches (also capacitors where furnished with the Units) over to electrical contractor for installation (See Wiring.)

Where electric thermostats operating the motor circuit of AERIET Units are specified, heating contractor shall furnish the thermostats, but the installation shall be made by electrical contractor.

Where automatic temperature control is secured by means of modulation control of steam supply either with motor operated valve or self-contained thermostatic supply valve, heating contractor shall furnish and install the temperature control valve in supply connection of AERIET Units in accordance with manufacturer's instructions. (See automatic temperature control section of heating specifications.)

When installation has been completed, heating contractor shall operate entire heating system at pressure specified, in order to demonstrate that all AERIET Units operate correctly at all motor speeds, and that proper steam circulation is provided and heating elements are properly vented and kept free from condensation.



Wiring

The heating contractor shall deliver to the electrical contractor, the fan and motor assembly for each AERIET specified on plans or specification schedule, together with the proper type of speed control switch, (and capacitor for model 20T and model 27T 60 cycle units where specified,) and also, when called for by automatic control specifications, he shall deliver the proper number and type of electric thermostats.

Speed control switches furnished when model 20M and 27M, 110 or 220 volt 60 cycle units are specified, are four point rotary type. Brass cover plates are furnished with switches. Electrical contractor shall furnish standard single switch box for each Unit.

Three gang tumbler type switches are furnished with all other sizes and types of AERIET Units. Electrical contractor shall furnish and install standard three gang switch boxes and standard three gang cover plates of finish specified by architect.

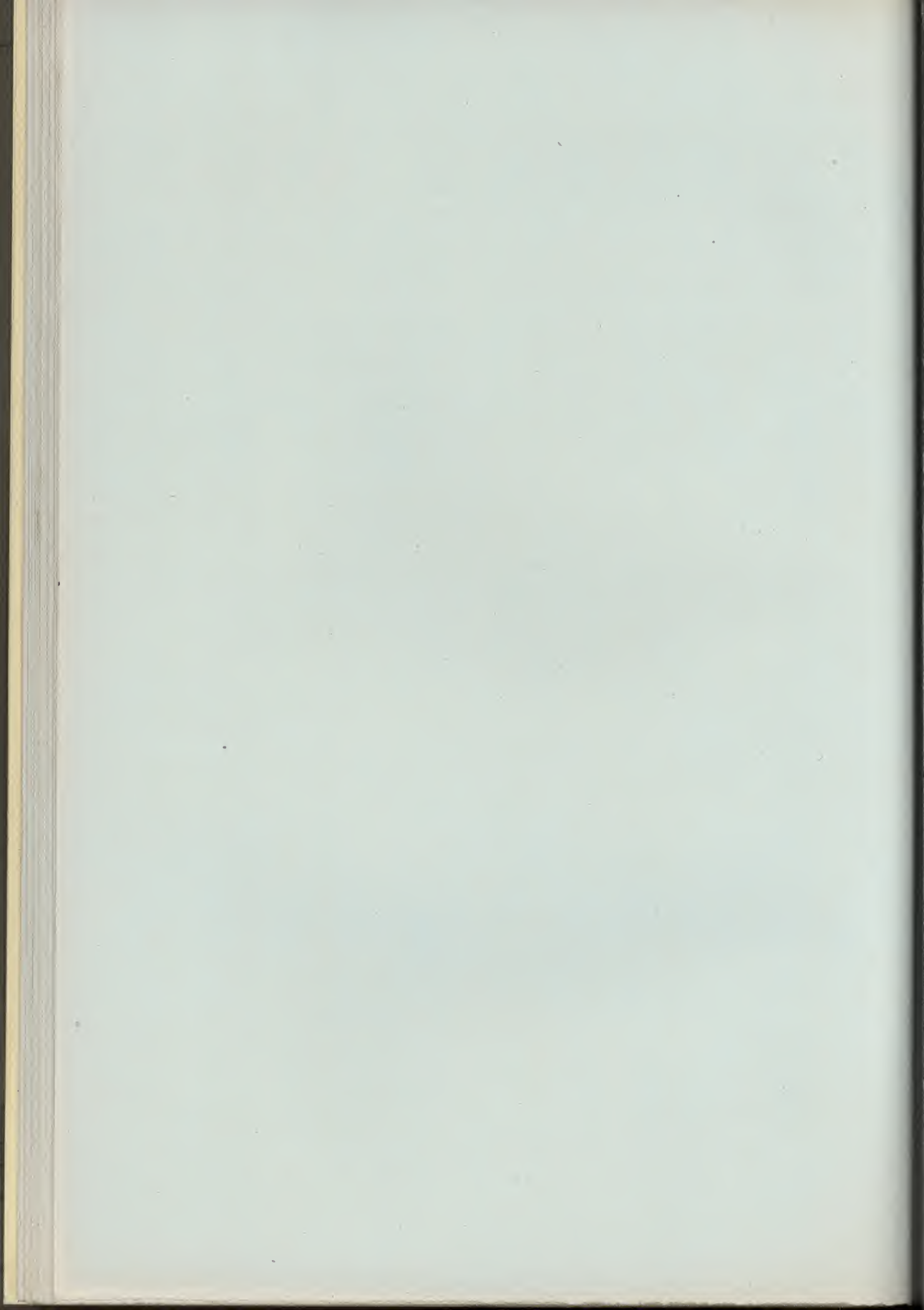
Electrical contractor shall furnish and install a complete and independent system of wiring with main feeder to a distributing panel for all AERIET Units, or wiring connections to AERIET units may be made from lighting circuit as directed by architect or engineer.

All wiring shall be done in strict accordance with municipal or state rules or regulations, and also any local power company regulations that may be in force at the premises.

Electrical contractor must check all motor units, and it is his duty to notify architect and heating contractor if any motors are not wound for current available at the building.

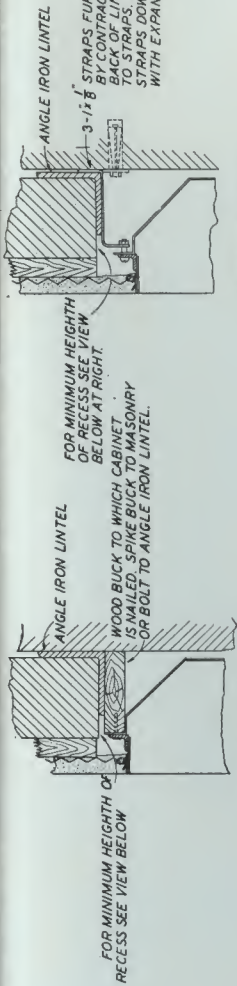
All wiring into AERIET cabinets including wall outlets for speed control switches and thermostats (if specified) shall be done in accordance with wiring diagrams furnished with Units, and shall be installed before plastering is started. After plastering is finished and walls decorated, contractor shall install fan and motor assembly, (and also capacitor where model 20T or 27T—110 or 220 volt 60 cycle units are specified) in cabinet and complete wiring connections to terminal block.

All electrical work shall be tested and motors operated at each speed before turning over completed installation.



NOTE

THESE SKETCHES INDICATE SUGGESTED METHODS ONLY OF FASTENING CABINET INTO RECESS.

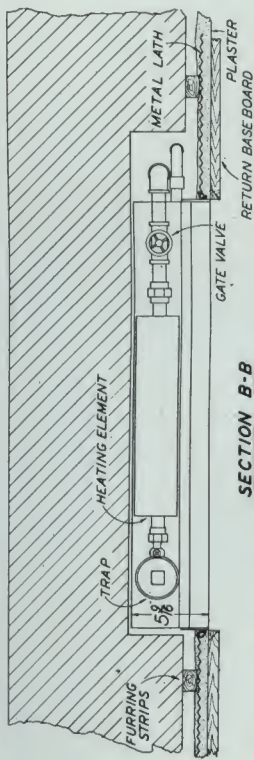


SECTION C-C

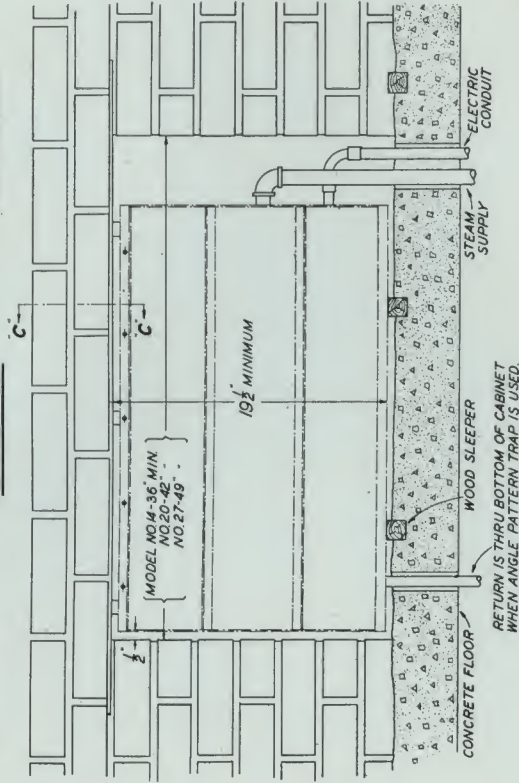
SHOWING METHOD OF FASTENING CABINET AT TOP OF RECESS

SECTION C-C

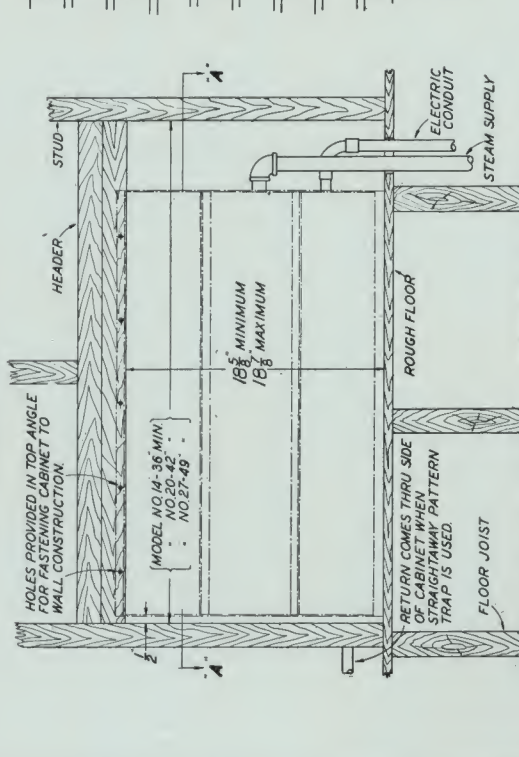
SHOWING ALTERNATE METHOD OF FASTENING CABINET AT TOP OF RECESS



SECTION B-B



SECTION A-A

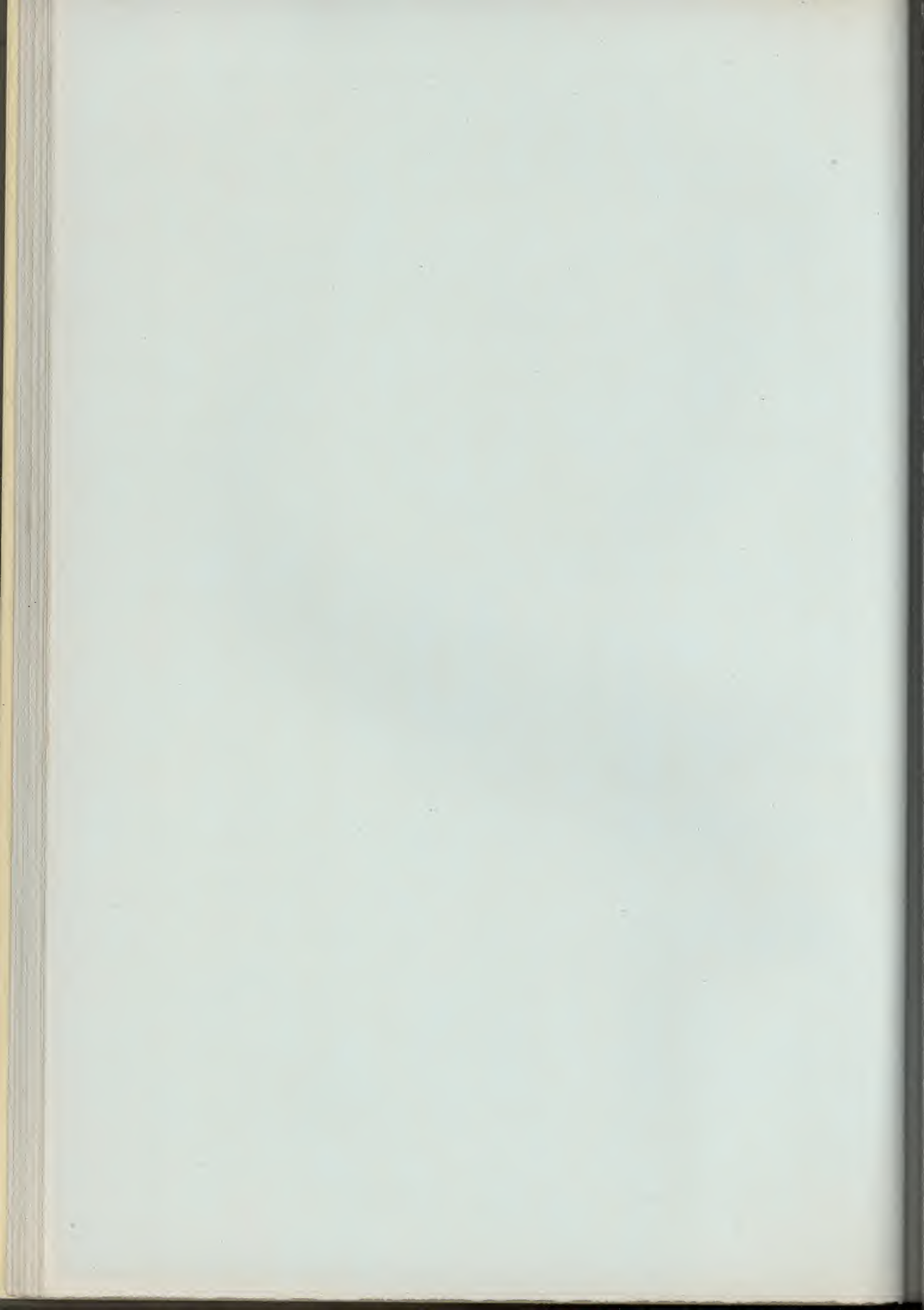


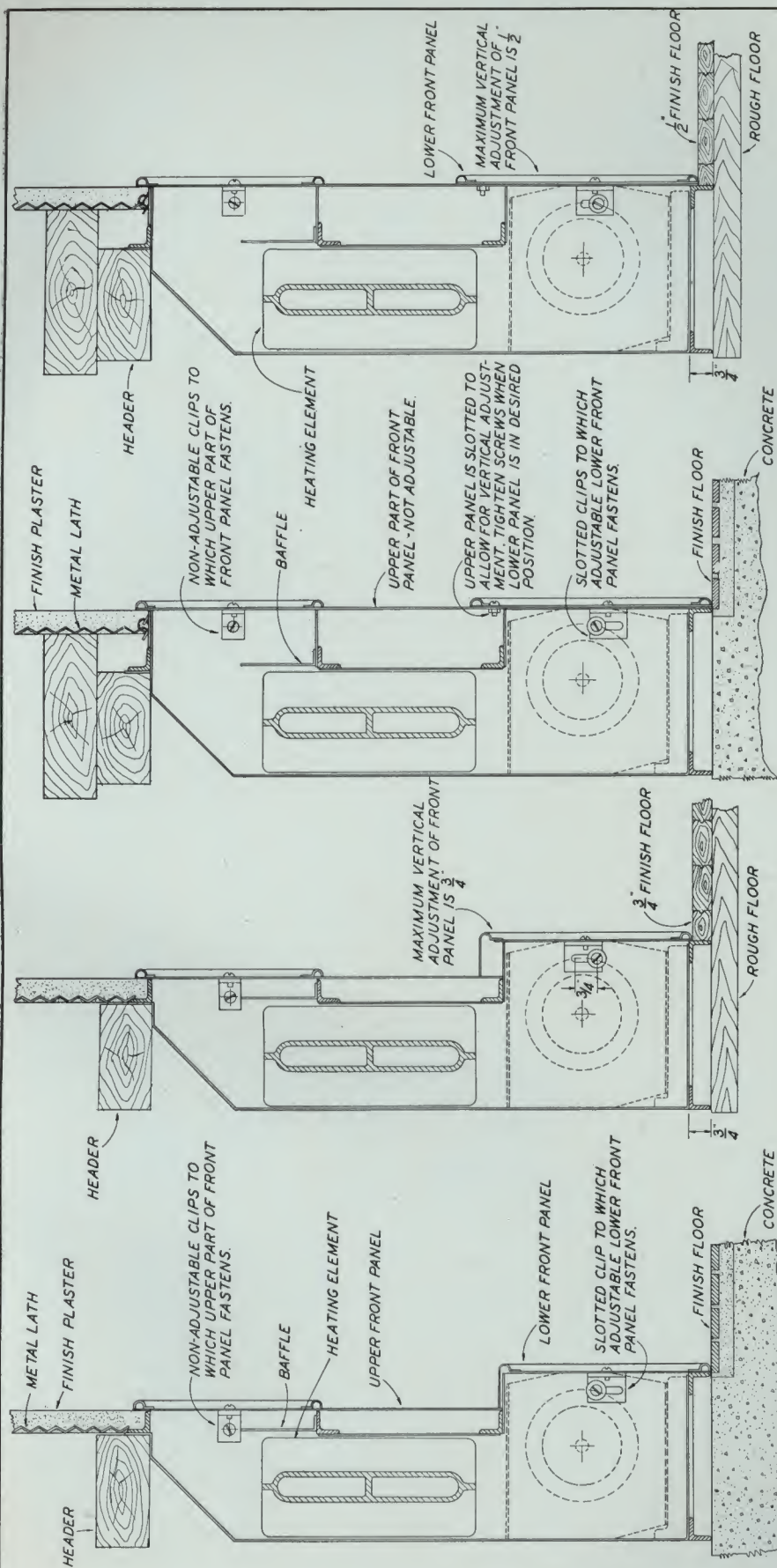
DWG. NO. 142027S3

RECESS IN FRAME WALL FOR OFFSET TYPE AERIE

RECESS IN MASONRY WALL FOR FLUSH TYPE AERIE

AIR-WAY ELECTRIC APPLIANCE CORP.
TOLEDO, OHIO
HEATING SYSTEMS DIVISION
WALL RECESS SIZES FOR AERIETS
MAY 19, 1930.





LOW POSITION-OFFSET TYPE

SHOWING LOWER FRONT PANEL IN LOWEST POSITION WHERE BOTTOM OF PANEL IS FLUSH WITH BOTTOM OF CABINET. THIS SECTION SHOWS ADJUSTMENT OF FRONT PANEL FOR TILE OR TERRAZZO FLOOR.

HIGH POSITION-OFFSET TYPE

SHOWING LOWER FRONT PANEL IN HIGHEST POSITION. $\frac{3}{4}$ FINISH FLOOR MAY BE ACCOMMODATED. THIS SECTION SHOWS ADJUSTMENT OF FRONT PANEL FOR $\frac{3}{4}$ FINISH FLOOR.

LOW POSITION-FLUSH TYPE

SHOWING LOWER PART OF FRONT PANEL IN LOWEST POSITION WHERE BOTTOM OF PANEL IS FLUSH WITH BOTTOM OF CABINET. THIS SECTION SHOWS ADJUSTMENT OF FRONT PANEL FOR TILE OR TERRAZZO FLOOR.

HIGH POSITION-FLUSH TYPE

SHOWING LOWER PART OF FRONT PANEL IN HIGHEST POSITION. $\frac{3}{4}$ FINISH FLOOR MAY BE ACCOMMODATED. THIS SECTION SHOWS ADJUSTMENT OF FRONT PANEL FOR $\frac{3}{4}$ FINISH FLOOR.

DWG. NO. 142027SI

FIGURE NO. 1

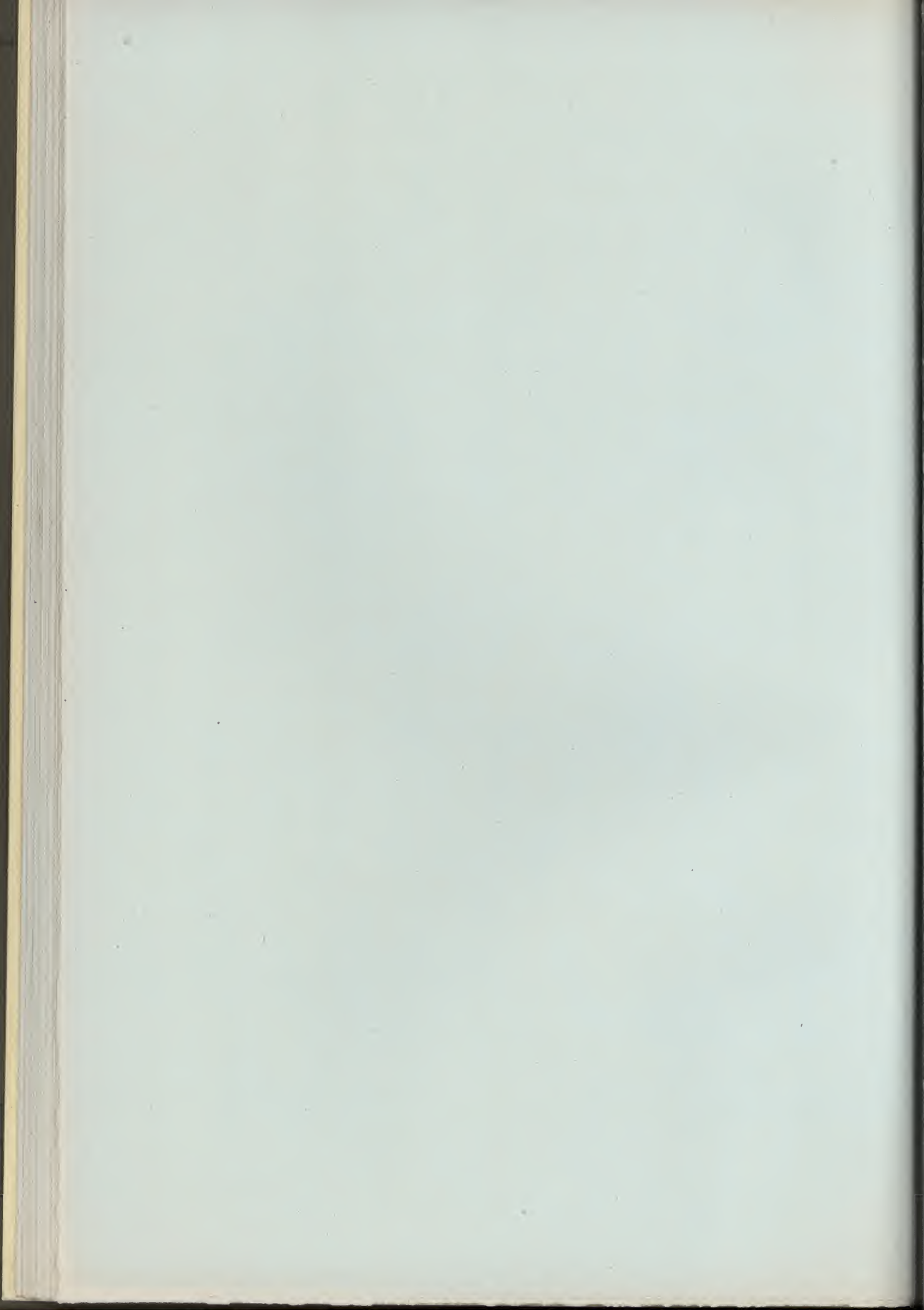
SHOWING BY MEANS OF TWO CROSS SECTION VIEWS ABOVE HOW FRONT PANEL MAY BE ADJUSTED TO ACCOMMODATE VARIOUS FINISH FLOOR THICKNESSES.

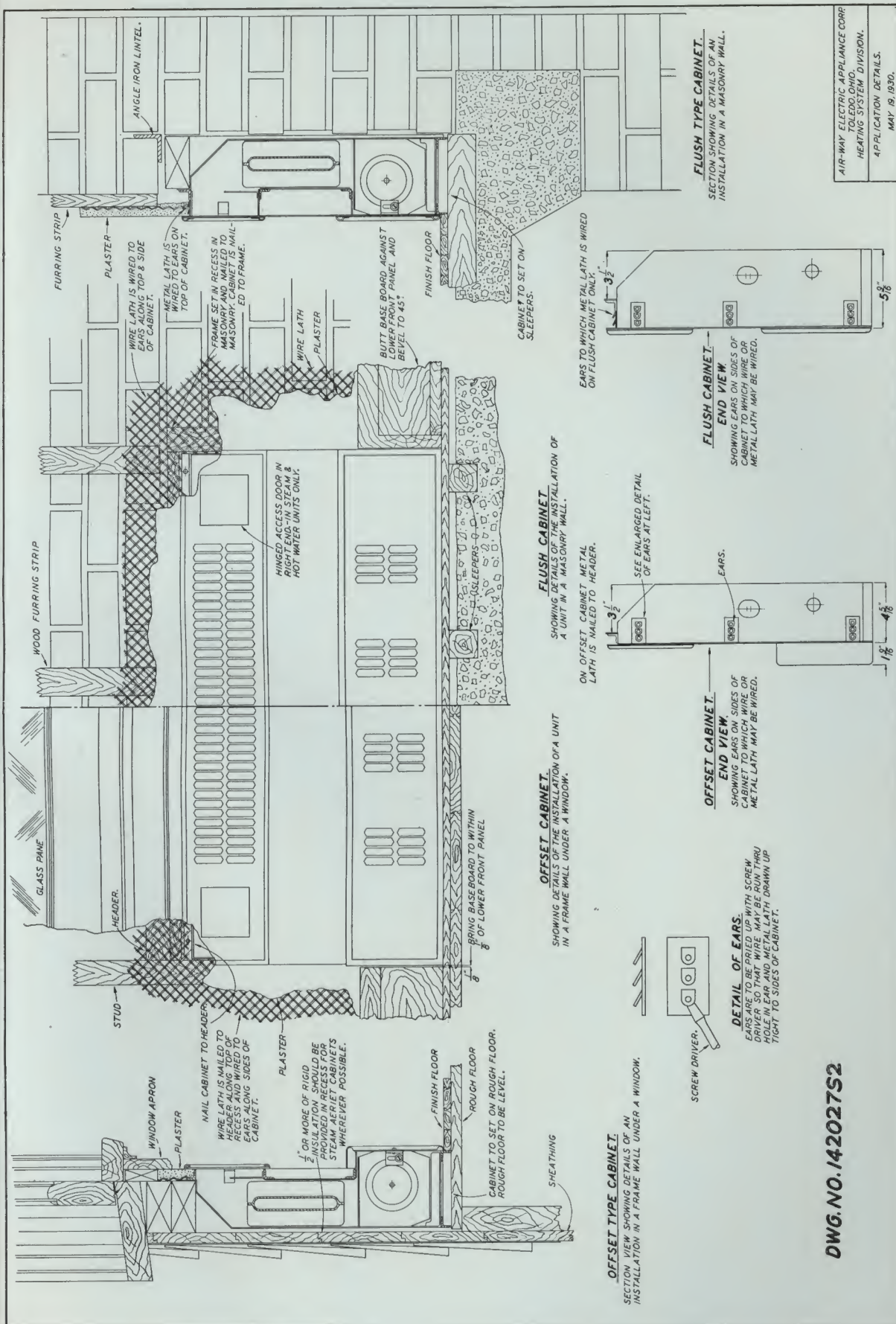
FIGURE NO. 2

SHOWING BY MEANS OF TWO CROSS SECTION VIEWS ABOVE HOW FRONT PANEL MAY BE ADJUSTED TO ACCOMMODATE VARIOUS FINISH FLOOR THICKNESSES.

AIR-WAY ELECTRIC APPL. CORP.
TOLEDO, OHIO.
HEATING SYSTEMS DIVISION

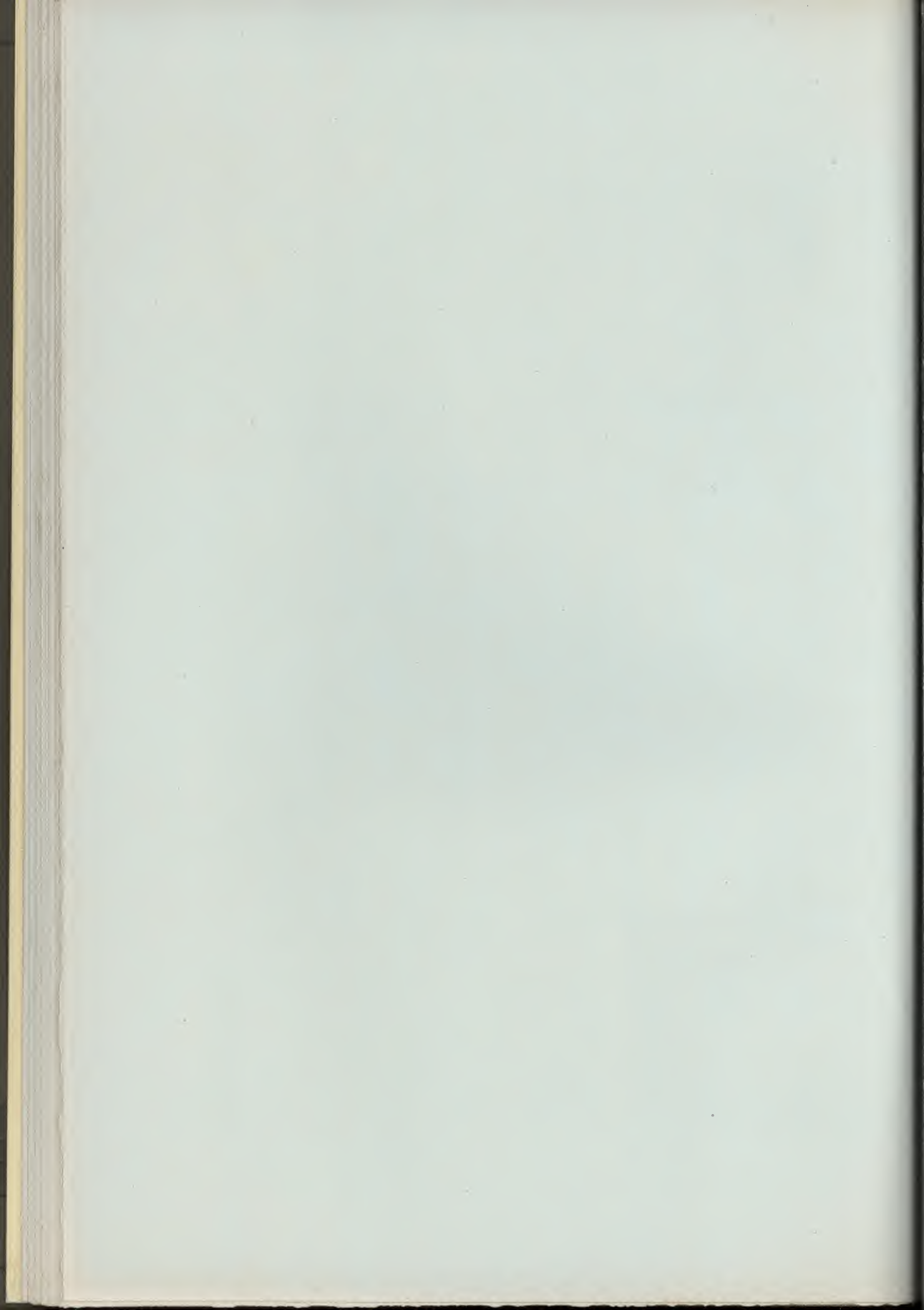
CROSS SECTIONS OF STEAM
AIRWAYS SHOWING FRONT PANEL
ADJUSTMENT DETAILS.
MAY 19, 1930.

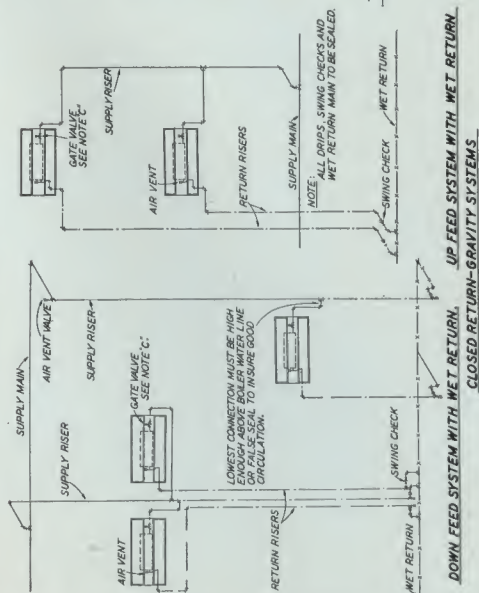




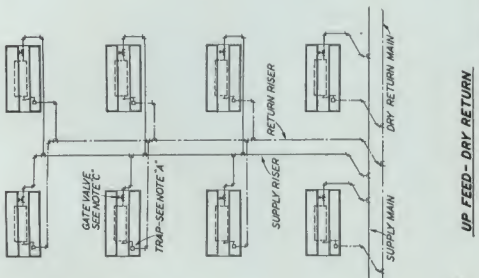
DWG. NO. 142027S2

AIR-WAY ELECTRIC APPLIANCE CORP.
TOLEDO, OHIO.
HEATING SYSTEM DIVISION.
APPLICATION DETAILS.
MAY 18, 1930.



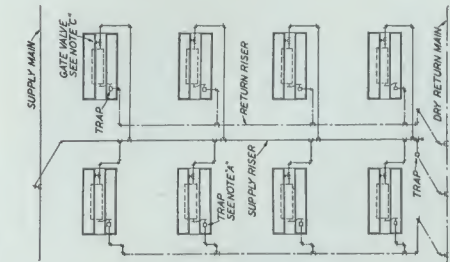


DOWN FEED SYSTEM WITH WET RETURN. UP FEED SYSTEM WITH WET RETURN. CLOSED RETURN-GRAVITY SYSTEMS.

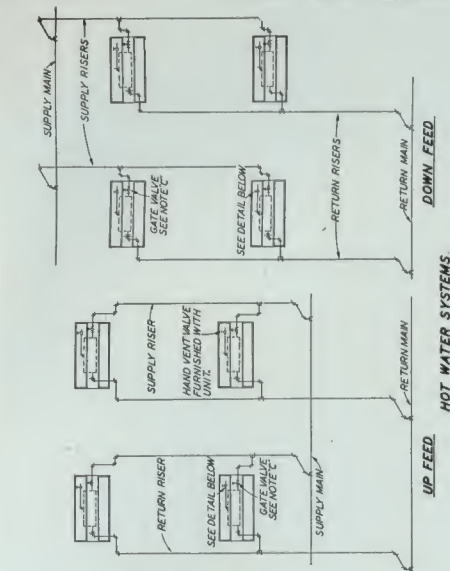


UP FEED - DRY RETURN.

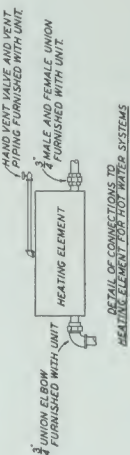
VENTED RETURN SYSTEM FOR LOW PRESSURE, VAPOR VACUUM AND VACUUM VAPOR SYSTEMS. AIRSET CONNECTIONS AS SHOWN IN DETAIL BELOW.



DOWN FEED - DRY RETURN.

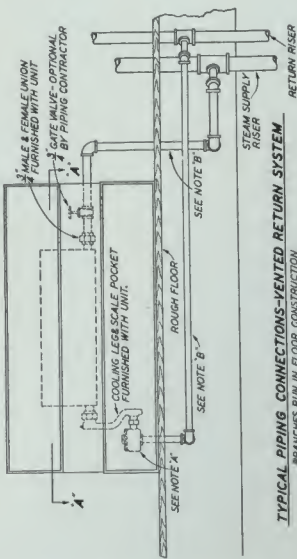


HOT WATER SYSTEMS.

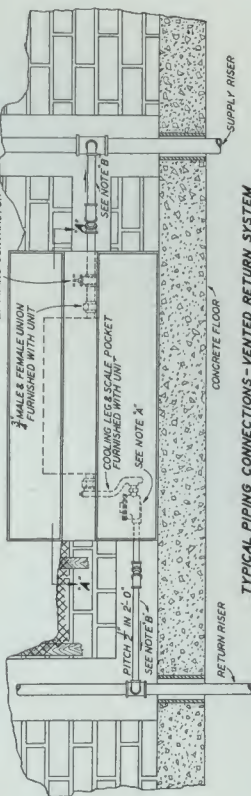


DETAIL OF CONNECTIONS TO HEATING ELEMENT FOR HOT WATER SYSTEMS.

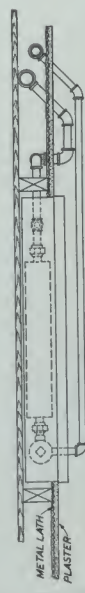
IMPORTANT NOTE
ALL SYSTEM DIAGRAMS SHOWN ARE SUGGESTED. CONSULT WITH THE MANUFACTURER OF THE BOILER OR CONTRACTOR DESIGNING AND INSTALLING PIPING SYSTEM THOROUGHLY UNDERSTANDS THE PRINCIPLES OF THE TYPE OF SYSTEM ADOPTED.



TYPICAL PIPING CONNECTIONS-VENTED RETURN SYSTEM. BRANCHES RUN IN FLOOR CONSTRUCTION.



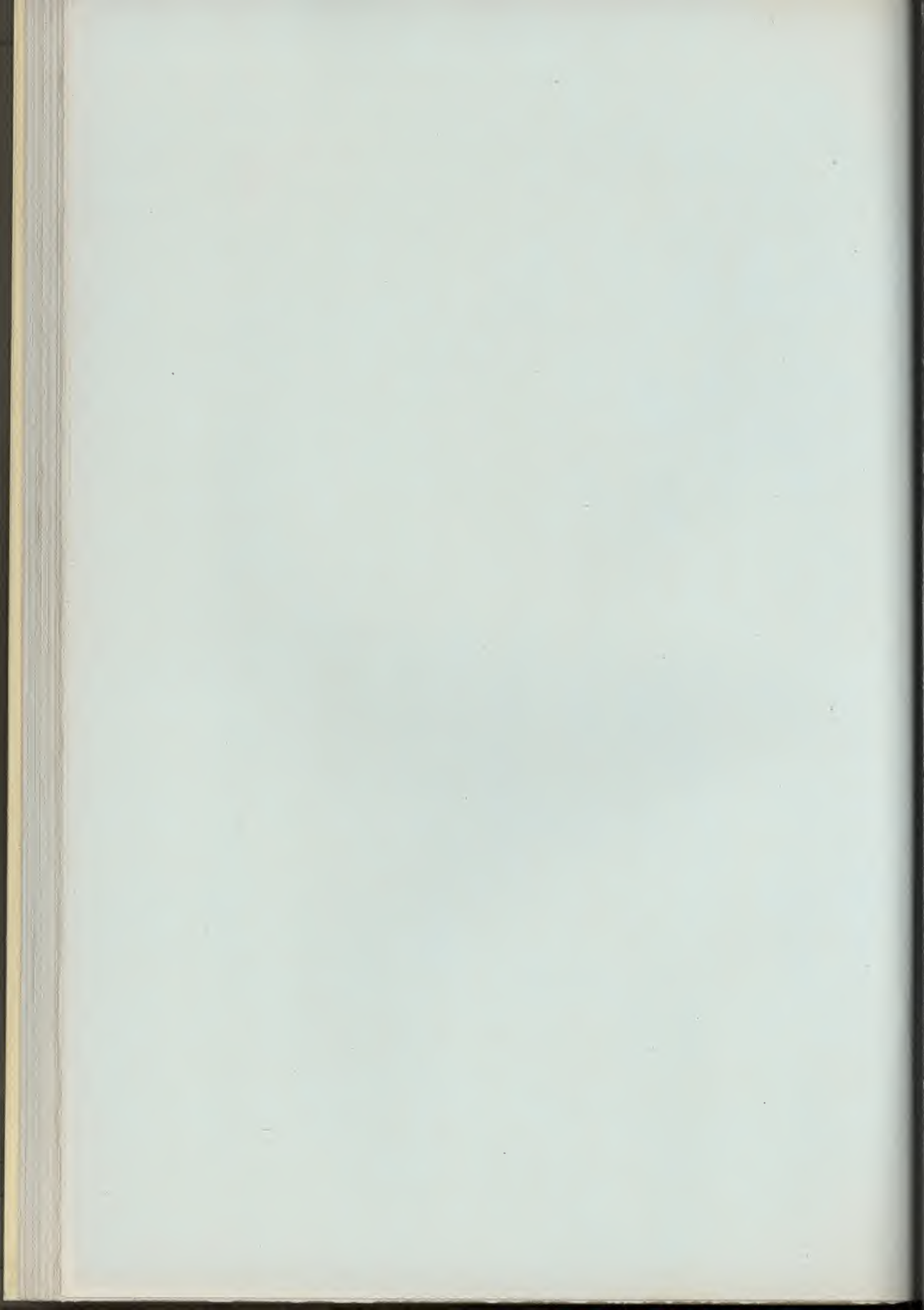
TYPICAL PIPING CONNECTIONS-VENTED RETURN SYSTEM. BRANCHES RUN IN MASONRY WALL CONSTRUCTION.

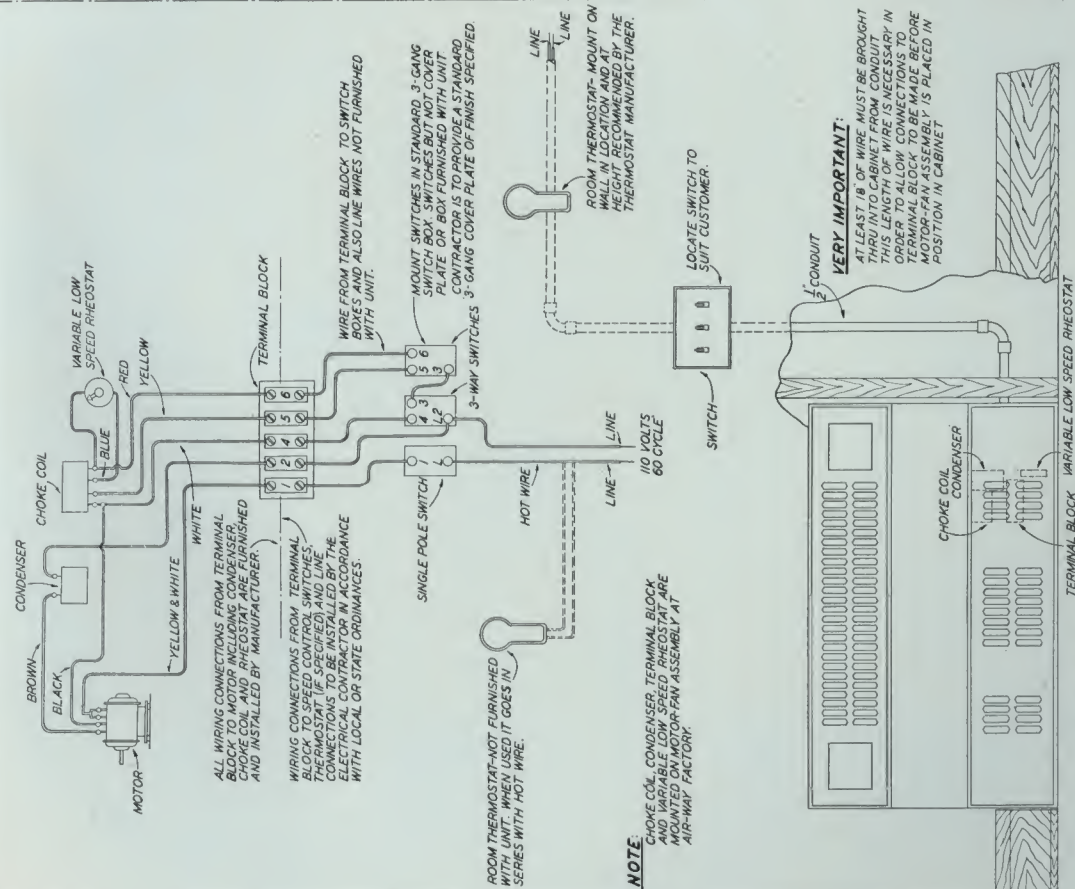


SECTION A-A

DWG. NO. 14202758

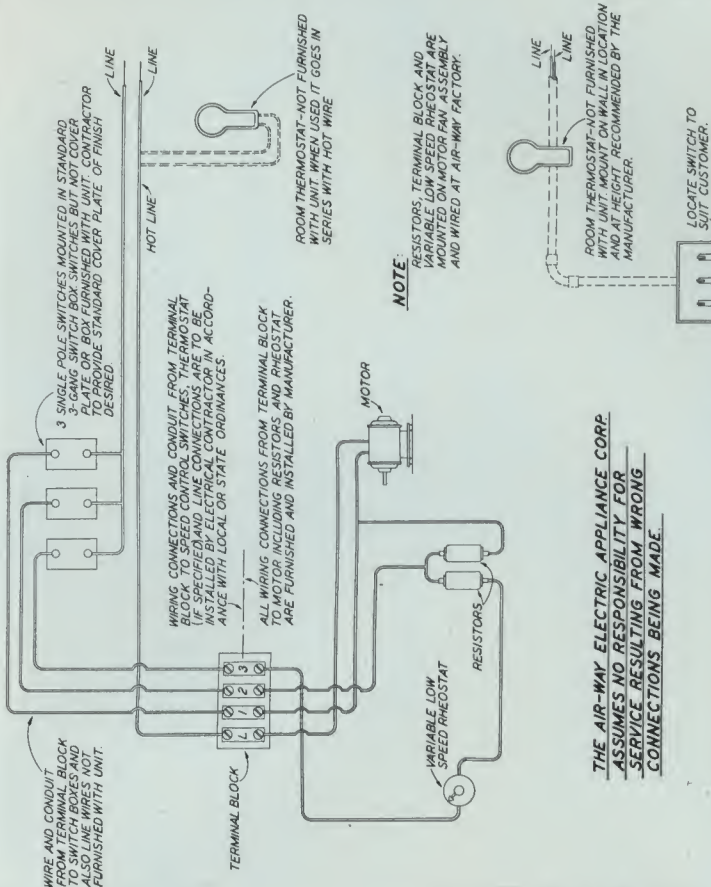
AIR-WAY ELECTRIC APPL. CORP.
TOLEDO, OHIO
HEATING SYSTEMS DIVISION
AERSET PIPING CONNECTIONS
MAY 19, 1930





WIRING DIAGRAM FOR MODELS NO. 14 ST AND 14 SM
110 VOLT 60 CYCLE AIR-WAY AERIETS

DWG NO 142027S4

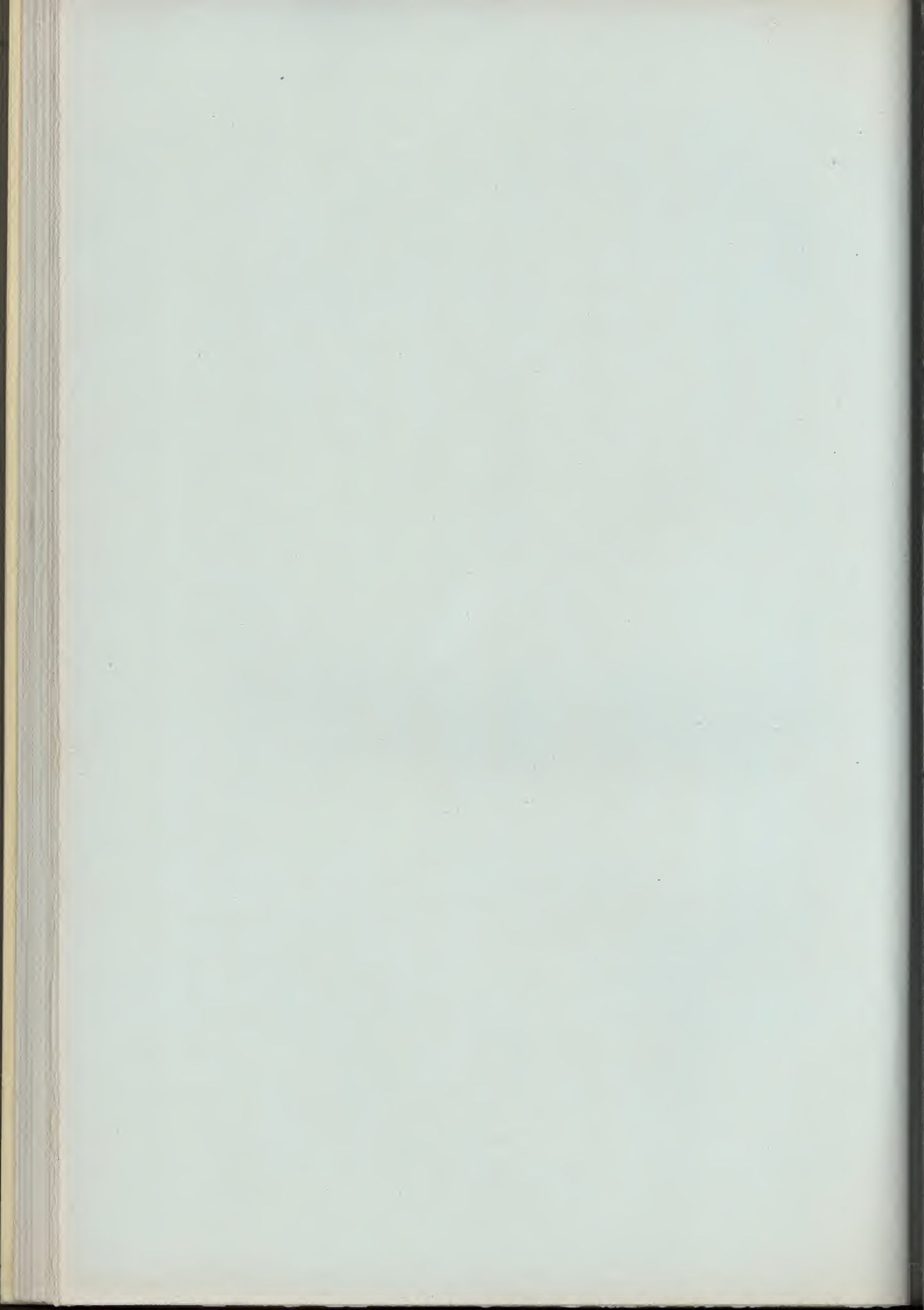


VERY IMPORTANT

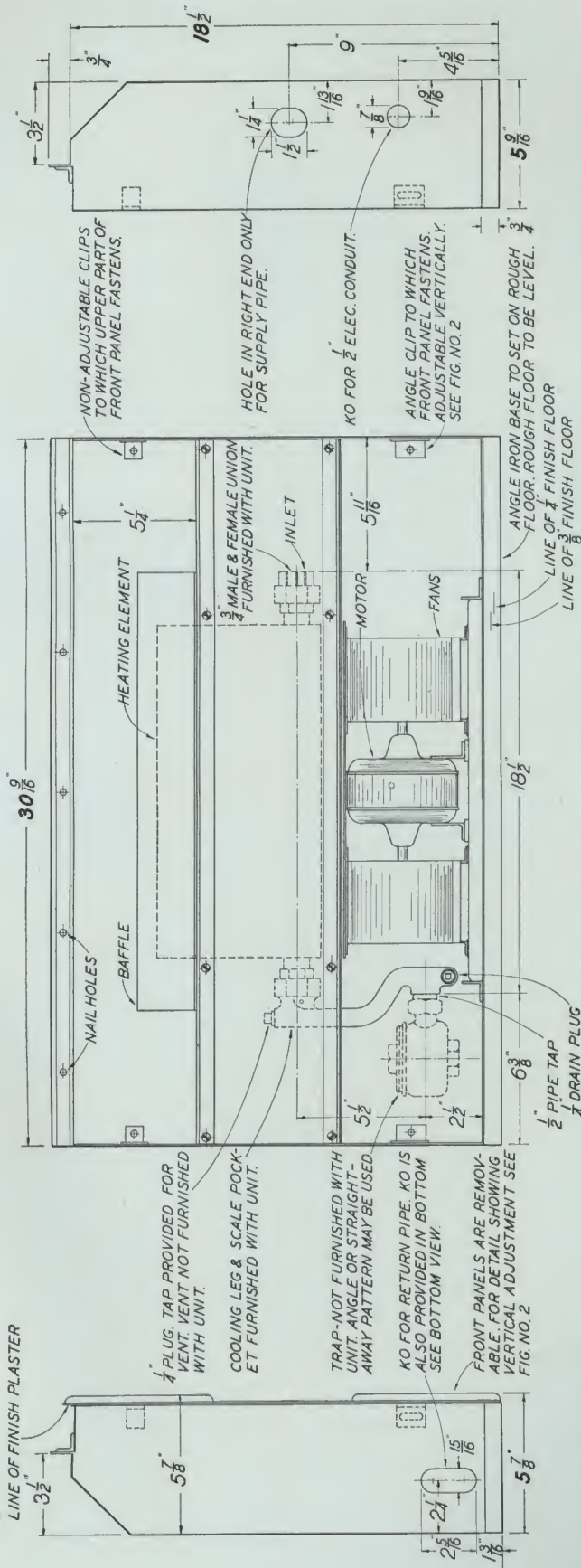
AT LEAST 18" OF WIRE MUST BE BROUGHT THRU INTO CABINET FROM CONDUIT. THIS LENGTH OF WIRE IS NECESSARY IN ORDER TO ALLOW CONNECTIONS TO TERMINAL BLOCK TO BE MADE BEFORE MOTOR-FAN ASSEMBLY IS PLACED IN POSITION IN CABINET.

WIRING DIAGRAM FOR ALL 25 CYCLE AND D. C. AERIETS
MODELS 14 ST 14 SM 20 ST 20 SM 27 ST 27 SM

AIR-WAY ELECTRIC APPLANCE CORP
TOLEDO, OHIO
HEATING SYSTEMS DIVISION
STEAM AERIET WIRING DIAGRAMS
JULY 16, 1930.





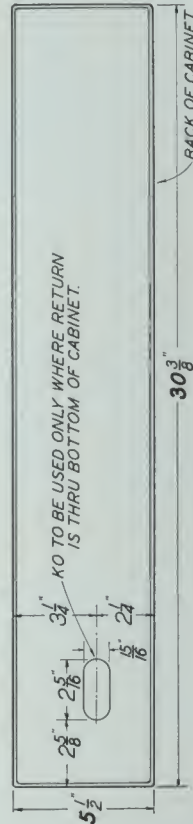


LEFT END VIEW
FRONT PANELS IN PLACE

FRONT VIEW SHOWING MOTOR-FAN ASSEMBLY
FRONT PANELS REMOVED

RIGHT END VIEW
FRONT PANELS REMOVED

NOTE:
FOR WIRING DIAGRAM,
SWITCH ARRANGEMENT,
ETC. SEE DWG. NO. 20275TM6
OR DWG. NO. 14202754.



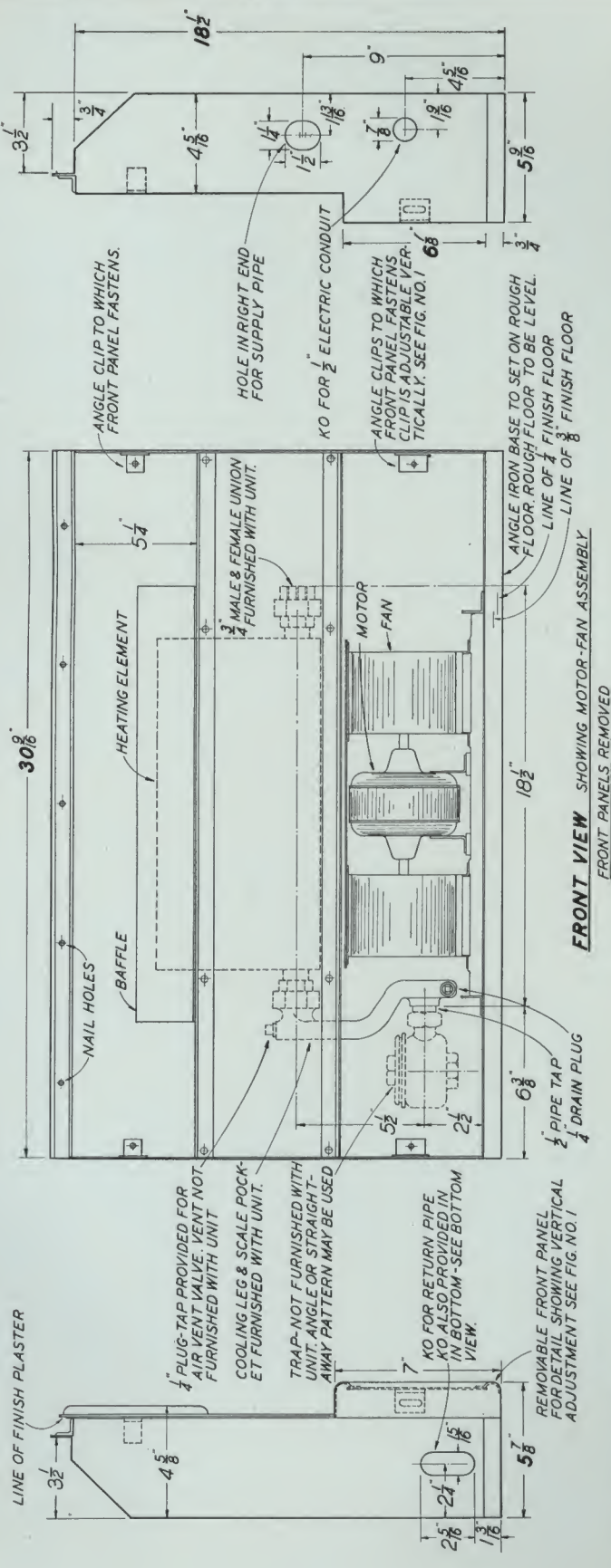
DWG. NO. 14SFTM

BOTTOM VIEW SHOWING BOTTOM KO

MODEL NO. 14
AIR-WAY STEAM AERIET
FLUSH TYPE

AIR-WAY ELECTRIC APPLIANCE CORP.
TOLEDO, OHIO
HEATING SYSTEMS DIVISION
STEAM AERIET ROUGHING DIMENSIONS
MAY 19, 1930.
r.s.d.





LEFT END VIEW
FRONT PANELS IN PLACE

FRONT VIEW SHOWING MOTOR-FAN ASSEMBLY
FRONT PANELS REMOVED

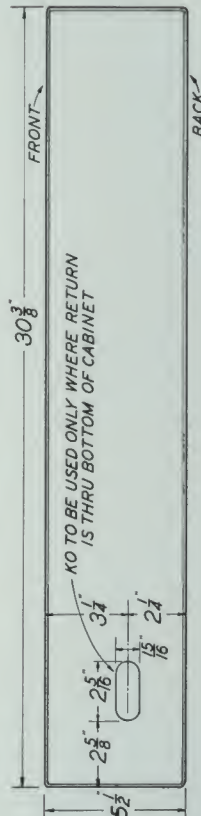
RIGHT END VIEW
FRONT PANELS REMOVED

NOTE:
FOR WIRING DIAGRAM,
SWITCH ARRANGEMENT,
ETC. SEE DWG. NO. 2027STM6
OR DWG. NO. 142027S4.

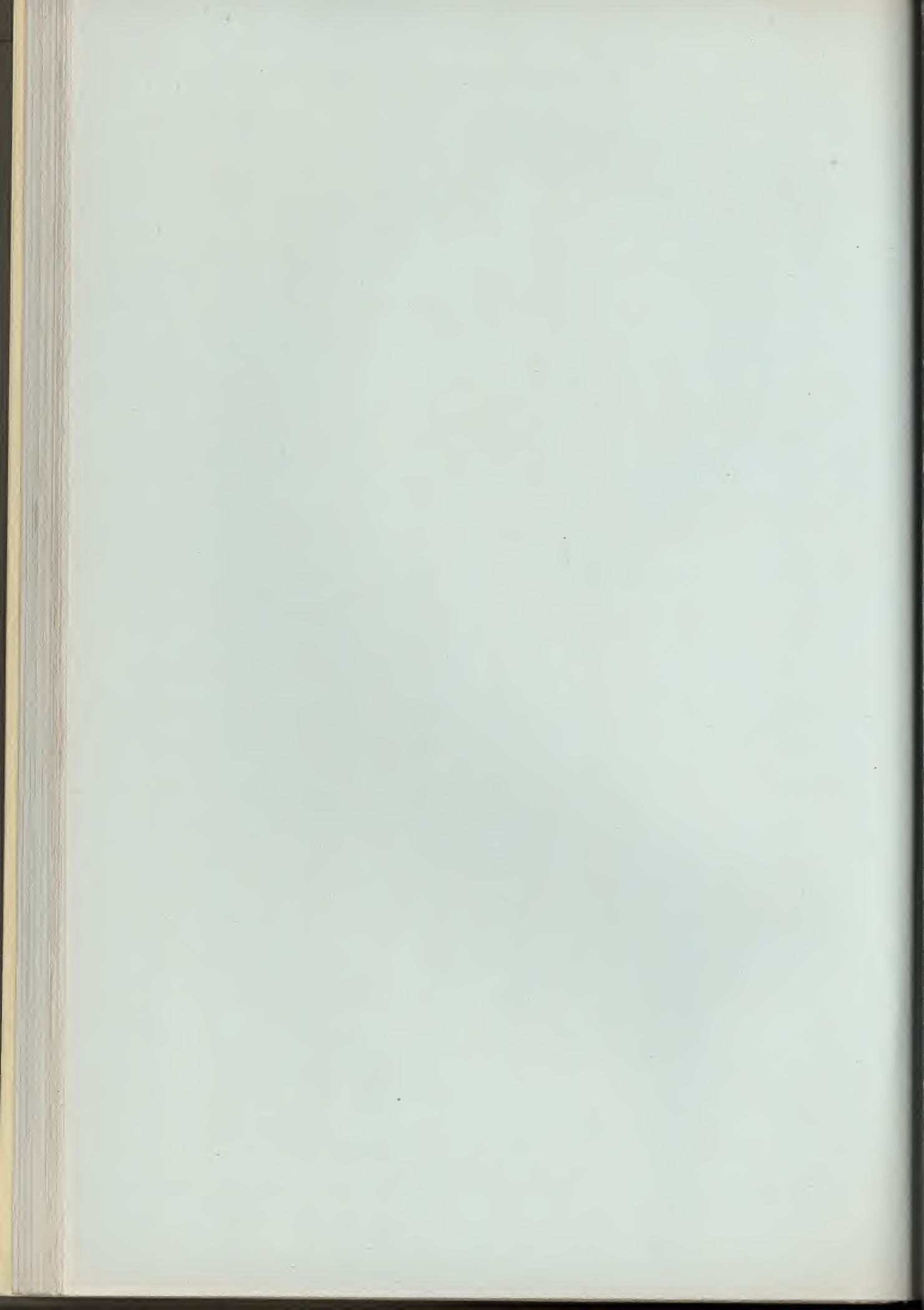
DWG. NO. 14SOTM

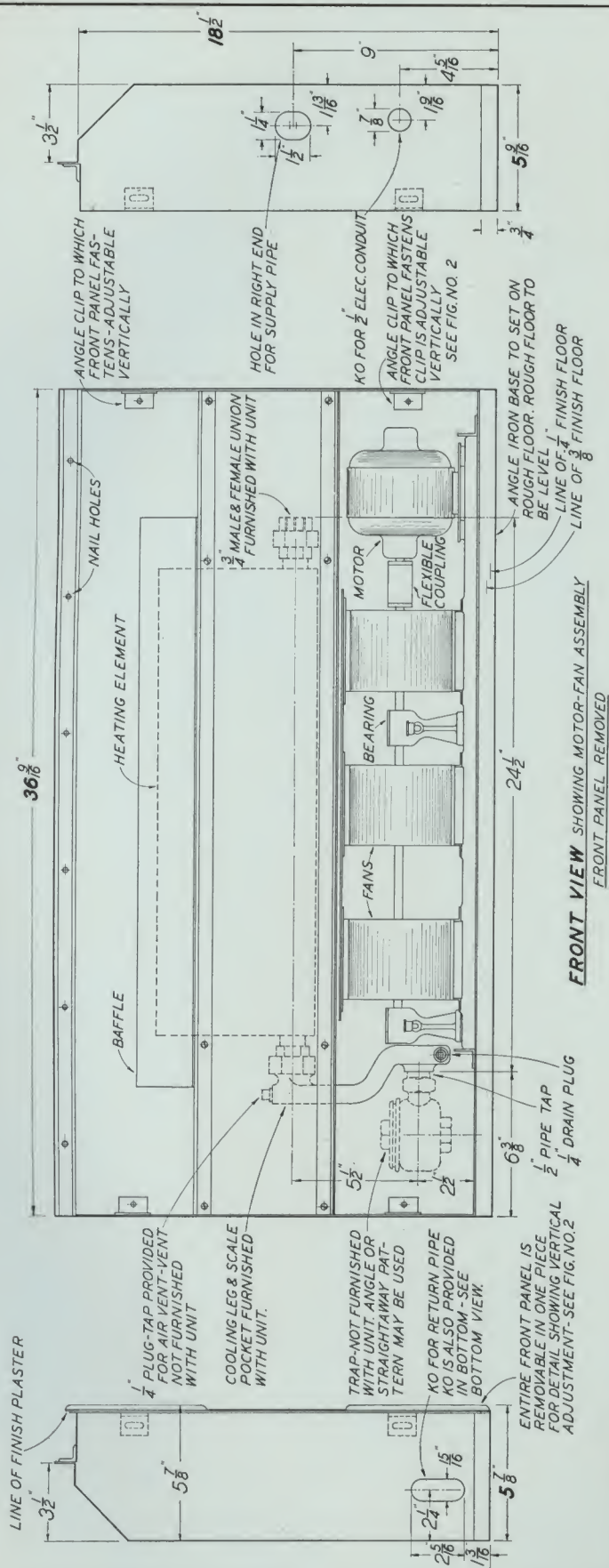
MODEL NO. 14
AIR-WAY STEAM AERIET
OFFSET TYPE

BOTTOM VIEW - SHOWING BOTTOM KO



AIR-WAY ELECTRIC APPL. CORP.
TOLEDO, OHIO
HEATING SYSTEMS DIVISION
STEAM AERIET ROUGHING DIMENSIONS
MAY 19, 1930



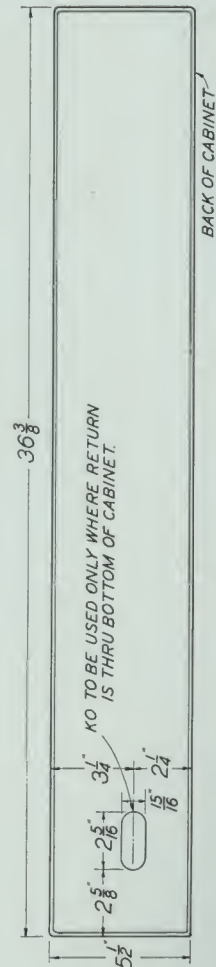


LEFT END VIEW
FRONT PANEL IN PLACE

NOTE:
FOR WIRING DIAGRAM,
SWITCH ARRANGEMENT,
ETC. SEE DWG. NO. 2027STM6
OR DWG. NO. 142027S4.

DWG. NO. 20SFTM

FRONT VIEW SHOWING MOTOR-FAN ASSEMBLY
FRONT PANEL REMOVED



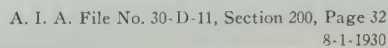
BOTTOM VIEW SHOWING BOTTOM KO

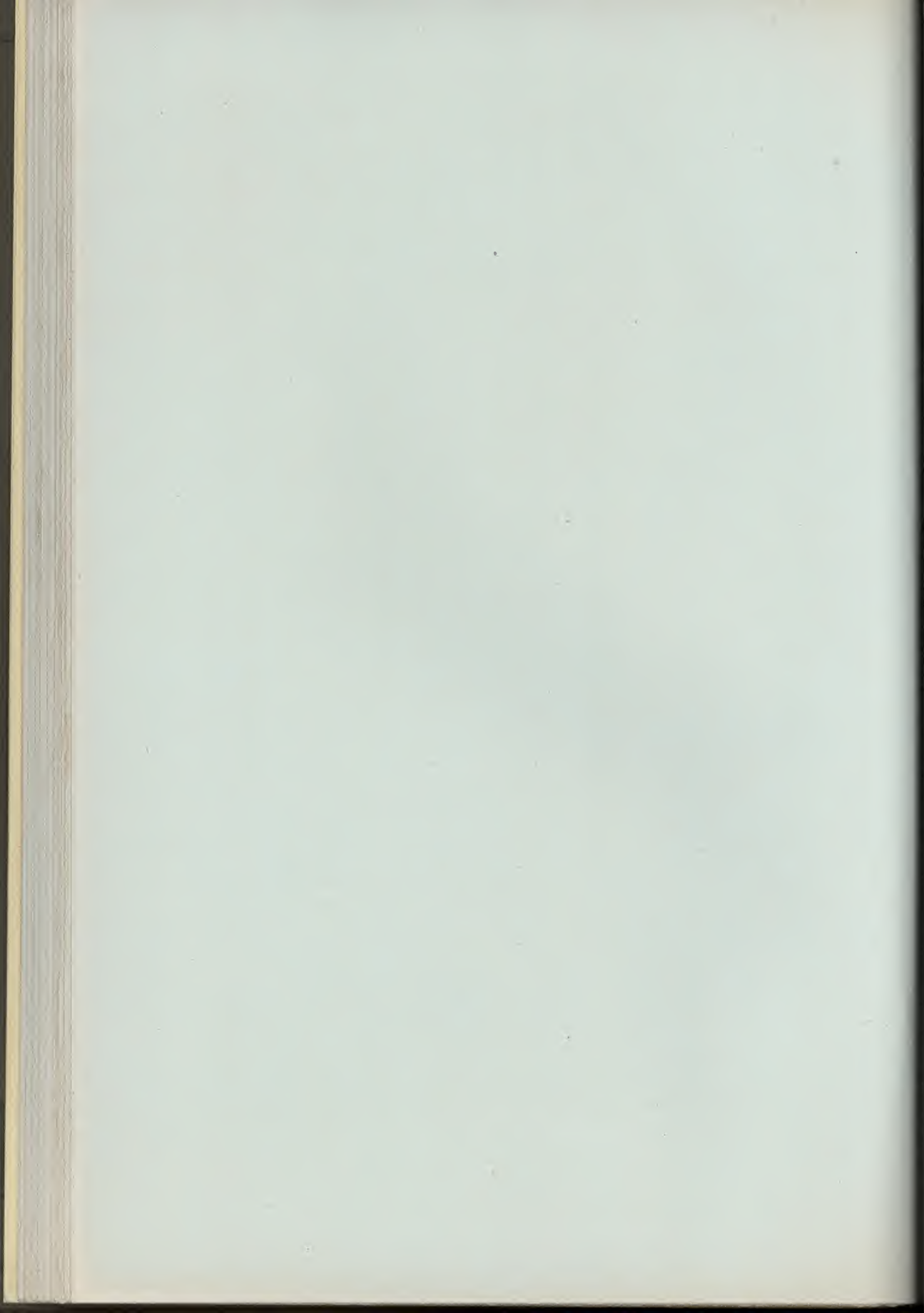
RIGHT END VIEW
FRONT PANEL REMOVED

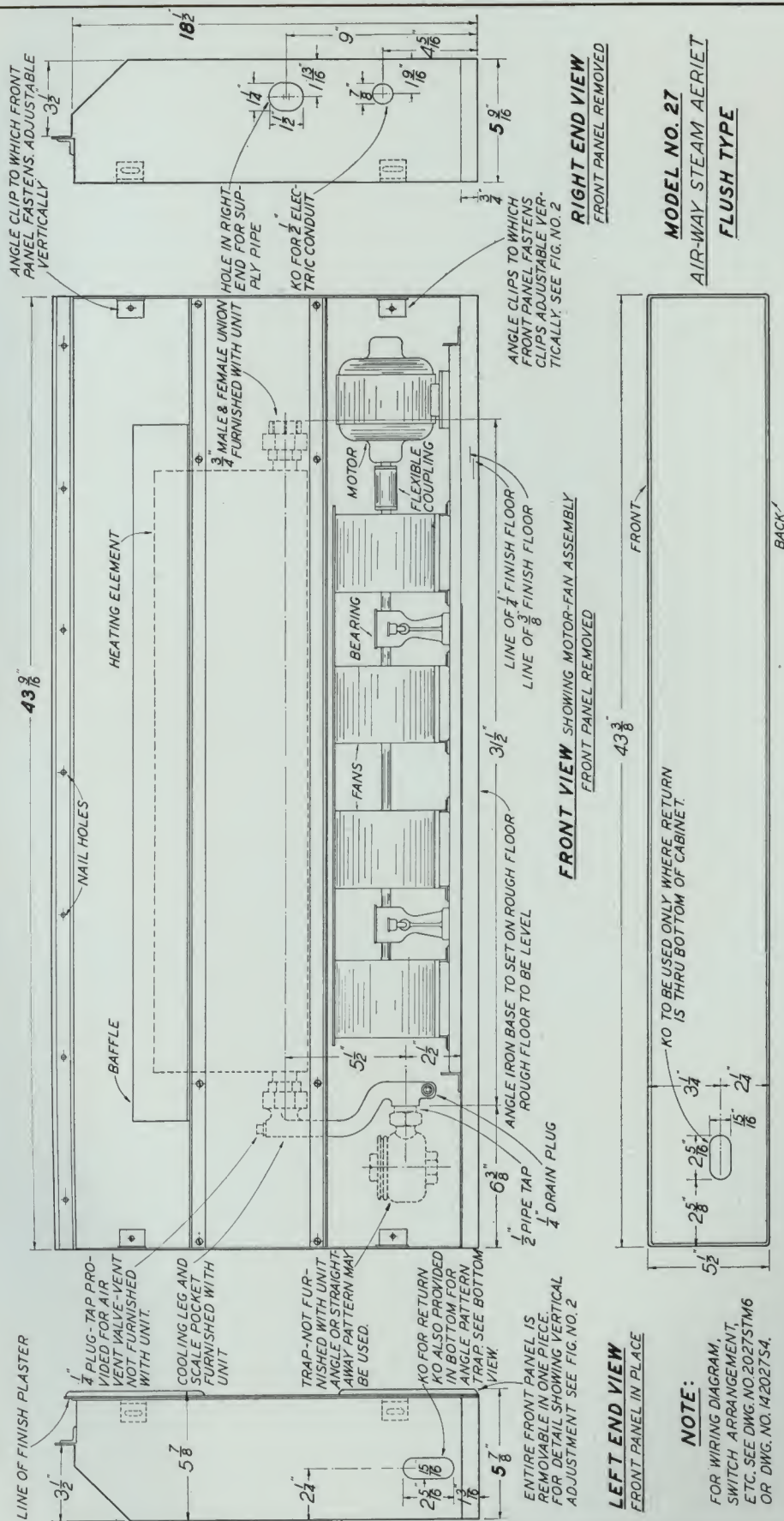
MODEL NO. 20
AIR-WAY STEAM AERIET
FLUSH TYPE

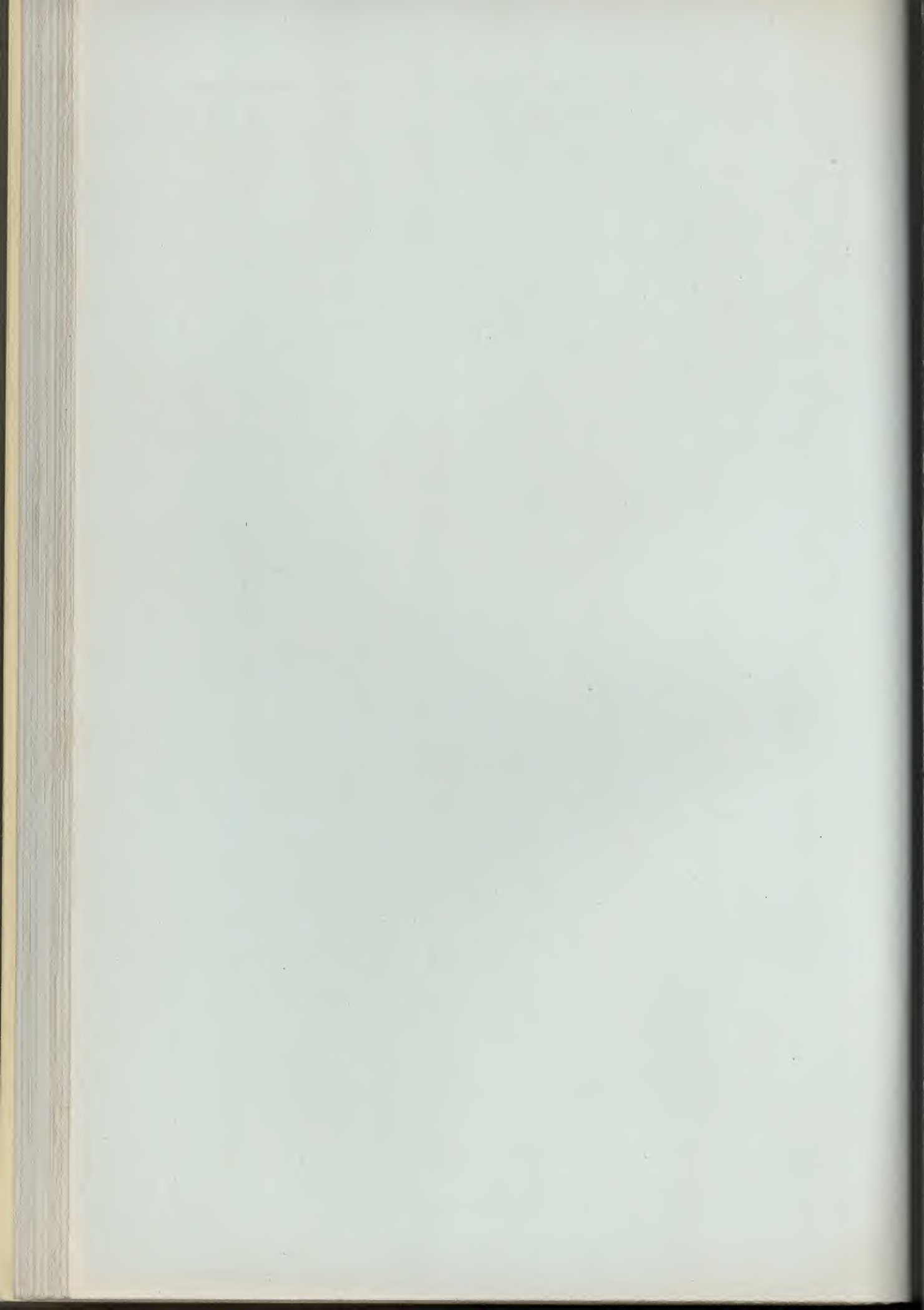
AIR-WAY ELECTRIC APPLIANCE CORP.
TOLEDO OHIO
HEATING SYSTEMS DIVISION
STEAM AERIET ROUGHING DIMENSIONS
MAY 19 1930

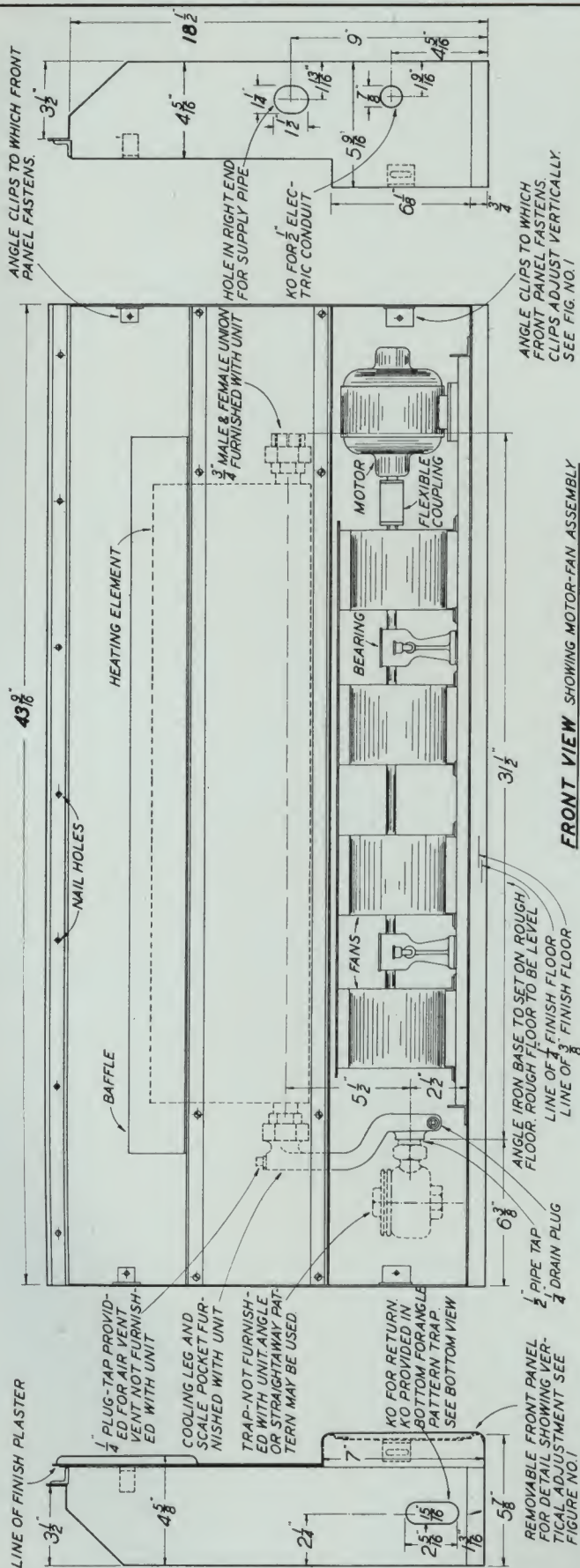












LEFT END VIEW

FRONT PANELS IN PLACE

NOTE:

FOR WIRING DIAGRAM, SWITCH ARRANGEMENT, ETC. SEE DWG. NO. 2027STM6 OR DWG. NO. 142027S4.

RIGHT END VIEW

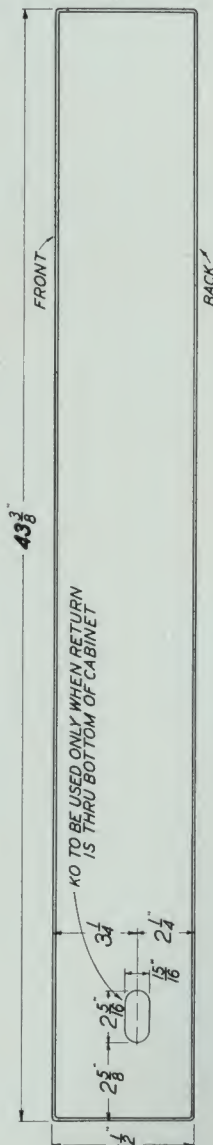
FRONT PANELS REMOVED

MODEL NO. 27

AIR-WAY STEAM AERIET

OFFSET TYPE

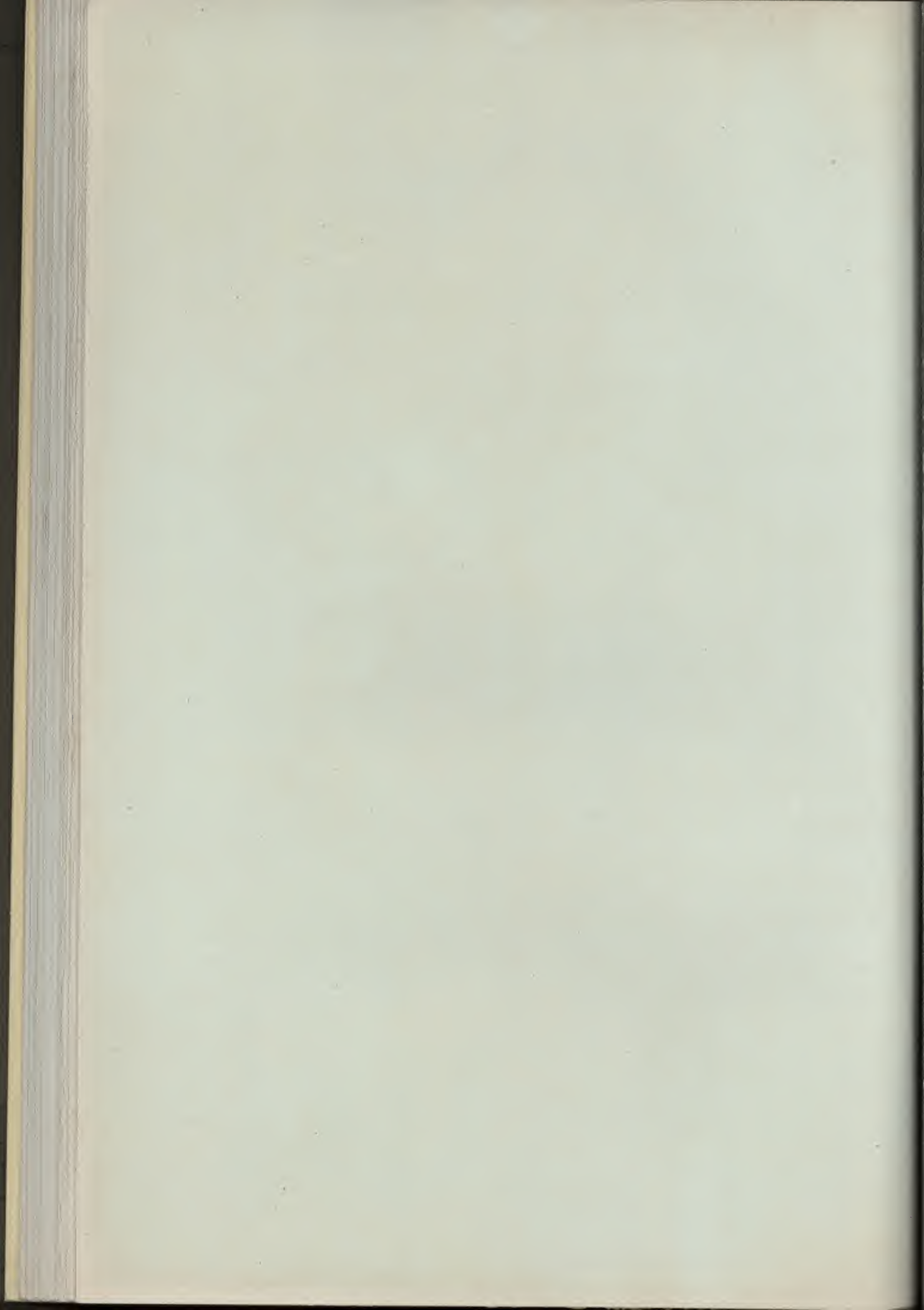
FRONT VIEW SHOWING MOTOR-FAN ASSEMBLY



BOTTOM VIEW SHOWING BOTTOM KO

DWG. NO. 27SOTM

AIR-WAY ELECTRIC APPL. CORP.
TOLEDO OHIO
HEATING SYSTEMS DIVISION
STEAM AERIET ROUGHING DIMENSION
MAY 19, 1930



LIST PRICES STEAM AND HOT WATER AIR-WAY AERIETS

LIST PRICE

Model	Manual Control	Thermostatic Control *	Net Weights of Unit	Shipping Weight Unit less Motor & Fan Assembly	Shipping Weight Motor and Fan Assembly
14	\$ 69.50	\$ 75.00	79 lbs.	85 lbs.	28 lbs.
20	90.00	100.00	102.5 lbs.	97 lbs.	44.5 lbs.
27	120.00	130.00	119 lbs.	113 lbs.	49 lbs.

All list prices listed above cover either Flush or Offset cabinets. The above Models 14, 20 and 27 will be furnished at the above list prices with single phase, AC 110 volt motors, either 60 or 25 cycle, and 110 volts DC. These three electrical ratings will be carried in stock. 220 volts AC and 230 volts DC motors will not be carried in stock and we very much prefer not to furnish steam Aeriets for 220 volt class operation. In any event 220 volt class thermostatic control units cannot be furnished and manual control units must be made the subject of a special inquiry in each case.

For prices on combination steam and electric Aeriets refer to electric Aeriet price sheet.

* The difference in list price between manual control and thermostatic control only covers the different type motor required. The thermostatic control list price does not include the price of a thermostat or any auxiliary apparatus whatever.

ORDERING INSTRUCTIONS

- (1) Be sure and specify whether Model 14, 20 or 27.
- (2) Whether Hot Water or Steam.
 - (a) If steam give pressure.
- (3) Type of Cabinet, Offset or Flush.
- (4) Thermostatic or Manual Control.
- (5) Motor characteristics, AC Phase, Voltage, Cycles. DC Voltage.

In wiring orders, use the following symbols:

HOT WATER - - - W

OFFSET CABINET - - - - O

STEAM - - - - S

FLUSH CABINET - - - - F

MANUAL CONTROL - M

THERMOSTATIC CONTROL - T

Example: 14 SFT AC, 110, 60—would indicate a Model 14 Steam Aeriet, flush type cabinet, single phase AC, 110 volt, 60 cycle, motor for thermostatic control.

LIST PRICES AIR-WAY ELECTRIC AERIETS WALL TYPE

Model	K. W.	Type	List Price	Net Weight of Unit	Shipping Weight Unit less Motor & Fan Assembly	Shipping Weight Motor and Fan Assembly
14-E	1.7	Panel (flush or offset)	\$ 75.00	52 Lbs.	50 Lbs.	25.5 Lbs.
14-SE	1.7	Panel (flush or offset)	92.50	87 Lbs.	96 Lbs.	28 Lbs.
20-E	3	Panel (flush or offset)	97.50	95.5 Lbs.	91 Lbs.	42.5 Lbs.
20-E	4	Panel (flush only)	100.00	100 Lbs.	93 Lbs.	46 Lbs.
27-E	5½	Panel (flush only)	125.00	110.5 Lbs.	107.5 Lbs.	46 Lbs.

The Models 14-E and 14-SE will be furnished at the above list price with single phase, AC motors, 110 or 220 volts, 25 or 60 cycles, and DC motors 115 or 230 volts. 110 volts, 220 volts, 60 cycle; 115 volts DC and 110 volts, 25 cycle will be carried in stock; 220 volts, 25 cycles and 230 volts DC will not be carried in stock and will require three weeks delivery until further notice.

Model 20-E and Model 27-E Aeriets:

We know of no case where the heating elements of these Aeriets will be put in on 110 volts due to the amount of copper necessary and we are not requesting Underwriters' approval on these sizes for 110 volts. Therefore, Model 20-E and Model 27-E electric Aeriets will be furnished at the above list price for single phase, 60 cycle, 220 volts, or 25 cycle, 220 volts and DC 230 volts. These three ratings will be carried in stock.

Three phase applications must be installed by balancing single phase units on three phase circuits.

GENERAL

All of the above motors are constant speed and are not furnished in the three speed type. No Electric Aeriet is approved by the Underwriters for a thermostatic control and the motors are so connected that the motor must run when the heating element is turned on. (Motors, however may be run independent of the electric heating element for ventilating purposes.) All electric heating elements are provided with a thermal cut-out so that if the motor does not run when the heating element is turned on, thermal cut-out opens, whereupon reason must be located and new thermal link installed.

The Model 14-SE (combination steam and electric) has the electric heating unit installed and connected in the same manner as all electric Aeriets. Inasmuch as the motor on the fan unit is a constant speed type a thermostat may be inserted in the leads to the switch which controls the motor so that when the steam unit is being used the motor is thermostatically controlled as in the case of a standard thermostatically controlled steam Aeriet.

PORTABLE TYPE

Model	K. W.	Type	List Price	Shipping Weight Complete
14-EP	1.65	Cabinet Standard Walnut Finish*	75.00 \$59.50	45 Lbs.

*Other finishes \$5.00 list additional.

Model 14-EP will be furnished at the above list prices for single phase, AC, 110 volts, 60 or 25 cycles, or DC 115 volts. It will not be furnished in the 220 volt range.

The Model 14-EP while rated at 1.65 KW, which is 15 amperes at 110 volts, can by a very simple change with a screw driver be made into a heater with a KW capacity of 1.21 KW, which is 11 amperes at 110 volts.

ORDERING INSTRUCTIONS

- (1) Be sure and specify proper Model.
- (2) Specify Type of Cabinet, Offset or Flush.
- (3) Show KW capacity. This is necessary to distinguish the Model 20-E, 3 KW and 4 KW.
- (4) Give motor characteristics, A. C. Phase, Voltage, Cycles. D. C. Voltage.

In writing orders, use the following symbols:

ELECTRIC WALL TYPE - E

OFFSET CABINET - O

PORTABLE AERIET - - P

FLUSH CABINET - - F

LIST PRICES AIR-WAY ELECTRIC AIRSETS WALL TYPE

Model	K. W.	Type	List Price	Shipping Weight Net (in brackets)	Shipping Weight Gross (in brackets)
14-SE	1.5	Fixed (Hinge or offset)	2 45.00	27 1.00	30 1.10
14-ET	1.5	Fixed (Hinge or offset)	25.00	27 1.00	30 1.10
20-E	2	Fixed (Hinge or offset)	37.50	34 1.00	37 1.10
20-E	2	Fixed (Hinge or offset)	40.00	34 1.00	37 1.10
20-E	2	Fixed (Hinge or offset)	42.00	34 1.00	37 1.10
20-E	2	Fixed (Hinge or offset)	44.00	34 1.00	37 1.10
20-E	2	Fixed (Hinge or offset)	46.00	34 1.00	37 1.10
20-E	2	Fixed (Hinge or offset)	48.00	34 1.00	37 1.10
20-E	2	Fixed (Hinge or offset)	50.00	34 1.00	37 1.10
20-E	2	Fixed (Hinge or offset)	52.00	34 1.00	37 1.10
20-E	2	Fixed (Hinge or offset)	54.00	34 1.00	37 1.10
20-E	2	Fixed (Hinge or offset)	56.00	34 1.00	37 1.10
20-E	2	Fixed (Hinge or offset)	58.00	34 1.00	37 1.10
20-E	2	Fixed (Hinge or offset)	60.00	34 1.00	37 1.10
20-E	2	Fixed (Hinge or offset)	62.00	34 1.00	37 1.10
20-E	2	Fixed (Hinge or offset)	64.00	34 1.00	37 1.10
20-E	2	Fixed (Hinge or offset)	66.00	34 1.00	37 1.10
20-E	2	Fixed (Hinge or offset)	68.00	34 1.00	37 1.10
20-E	2	Fixed (Hinge or offset)	70.00	34 1.00	37 1.10
20-E	2	Fixed (Hinge or offset)	72.00	34 1.00	37 1.10
20-E	2	Fixed (Hinge or offset)	74.00	34 1.00	37 1.10
20-E	2	Fixed (Hinge or offset)	76.00	34 1.00	37 1.10
20-E	2	Fixed (Hinge or offset)	78.00	34 1.00	37 1.10
20-E	2	Fixed (Hinge or offset)	80.00	34 1.00	37 1.10
20-E	2	Fixed (Hinge or offset)	82.00	34 1.00	37 1.10
20-E	2	Fixed (Hinge or offset)	84.00	34 1.00	37 1.10
20-E	2	Fixed (Hinge or offset)	86.00	34 1.00	37 1.10
20-E	2	Fixed (Hinge or offset)	88.00	34 1.00	37 1.10
20-E	2	Fixed (Hinge or offset)	90.00	34 1.00	37 1.10
20-E	2	Fixed (Hinge or offset)	92.00	34 1.00	37 1.10
20-E	2	Fixed (Hinge or offset)	94.00	34 1.00	37 1.10
20-E	2	Fixed (Hinge or offset)	96.00	34 1.00	37 1.10
20-E	2	Fixed (Hinge or offset)	98.00	34 1.00	37 1.10
20-E	2	Fixed (Hinge or offset)	100.00	34 1.00	37 1.10

The Model 14-SE and 14-ET will be furnished at the above list price with single phase, AC motor, 110 or 220 volts, 15 or 60 cycles, and DC motor 115 or 230 volts, 110 watts, 60 cycles, 115 volts DC and 110 watts, 75 cycles will be carried in stock. 250 watts, 25 cycles and 250 watts, 180 cycles will be carried in stock and will require three weeks delivery (not further notice).

Model 20-E and Model 27-E Airsets

We know of no case where the normal capacity of these Airsets will be put in an 110-volt circuit. The amount of current necessary will be determined by the type of equipment connected to the circuit. Therefore, Model 20-E and Model 27-E Electric Airsets will be furnished at the above list price. The single phase, 60 cycle, 220 volts, or 27 cycle, 230 volts and DC 230 volts. These three ratings will be carried in stock.

These Electric Airsets must be installed by a qualified single phase electrician.

GENERAL

All of the above systems are constant speed and are not furnished in the fixed speed type. The fixed speed type is supplied in the 14-SE and 14-ET models. For a description of the fixed speed type, see the 14-SE and 14-ET models. The amount of current necessary will be determined by the type of equipment connected to the circuit. Therefore, Model 20-E and Model 27-E Electric Airsets will be furnished at the above list price. The single phase, 60 cycle, 220 volts, or 27 cycle, 230 volts and DC 230 volts. These three ratings will be carried in stock.

The Model 14-SE combination system and electric fan the electric fan and electric fan are constant speed in the same manner as all electric fans. Inasmuch as the motor on the fan is a constant speed type, a thermostat may be inserted in the line to the fan which will control the fan when the thermostat is being used. The fan is a thermostat controlled fan in the Model 14-SE combination system.

PORTABLE TYPE

Model	K. W.	Type	List Price	Shipping Weight Gross (in brackets)
14-ET	1.5	Fixed (Hinge or offset)	25.00	27 1.00

Shipping Weight (in brackets)

Model 14-ET will be furnished at the above list price for single phase, AC, 110 volts, 60 or 25 cycles, or DC, 115 volts. It will not be furnished in the 220 volt type. The Model 14-ET will be furnished at 1.5 KW, which is 150 watts, and by a very simple change with a motor driven by a fan with a KW capacity of 1.5 KW, which is 150 watts, or 110 watts.

ORDERING INSTRUCTIONS

1. The name and capacity of the Airset.
2. Single Type or Cabinet Type or Fixed.
3. Show KW capacity. This is necessary to determine the Model 20-E, 2 KW and 4 KW.
4. Give motor dimensions, A.C. type, voltage, cycles, D.C. voltage.

In writing orders, use the following symbols:

PORTABLE AIRSET	F
ELECTRIC WALL TYPE	E
OFFSET CABINET	O
FIXED CABINET	F

